FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

JANUARY, 1948

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Dikes and Fire Streams Prevent Spread of Gasoline Fire at Segundo, Calif. (See Article in This Issue)

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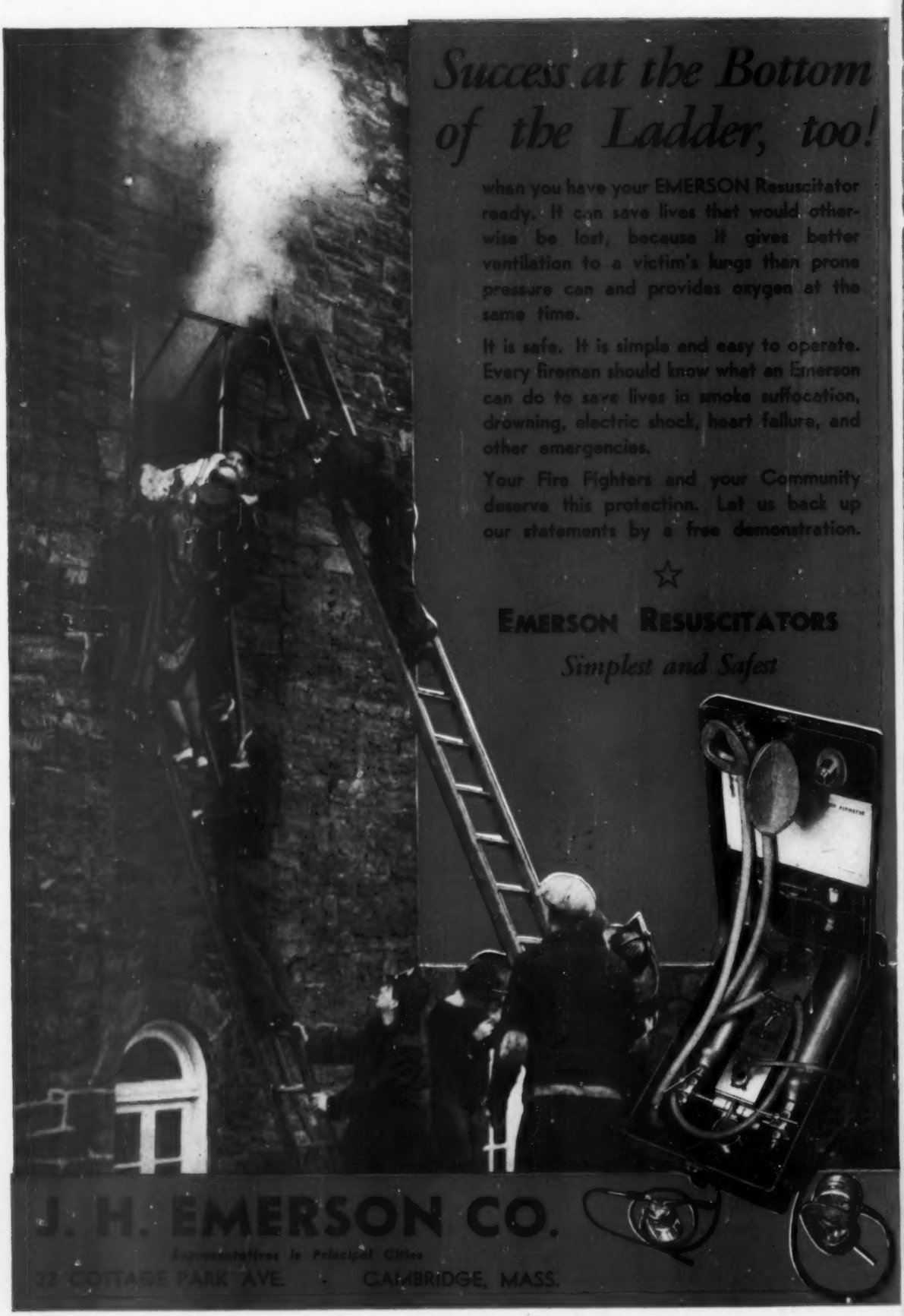
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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

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FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

The Moving Finger Writes—

"The Moving Finger writes; and having writ,
Moves on; nor all your Piety and Wit
Shall lure it back to cancel half a Line,
Nor all Your Tears wash out a Word of it."

Rubaiyat of Omar Khayyam

THE moving finger has written a dreadful record of destruction of life and property by fire during 1947. Nor piety nor wit will bring back the 11,000 and more lives lost by fire last year, nor repay the nation for the $700 million squandered so tragically.

● If any evidence were needed to attest the vital need of further improving and expanding the nation's fire protection and prevention facilities it is this tragic record of '47.

● Let it be blazoned for all to see and all to heed—*the only factor capable of checking and reducing these advancing, destructive fire losses is the fire service of our cities, towns, villages and rural areas.*

● At this propitious time, Fire Engineering again consecrates its efforts to the task of lowering the nation's fire waste, by raising the standards of its fire services.

FIRE ENGINEERING

The Journal of the Fire Profession since 1877, published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price: U. S., Latin America and Canada, $3.00 a year; Foreign, $4.00. Single copies, 35c. ¶Member of Audit Bureau of Circulations and Associated Business Papers Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1948, by Case-Shepperd-Mann Publishing Corp. President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDRICKS. Eastern Representative, ALFRED J. HOUGHTON. Advertising Manager, WILLIAM J. GIBSON. Circulation Manager, W. H. TOPHAM. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 8 So. Dearborn St., Chicago 3, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif.; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U. S. A.

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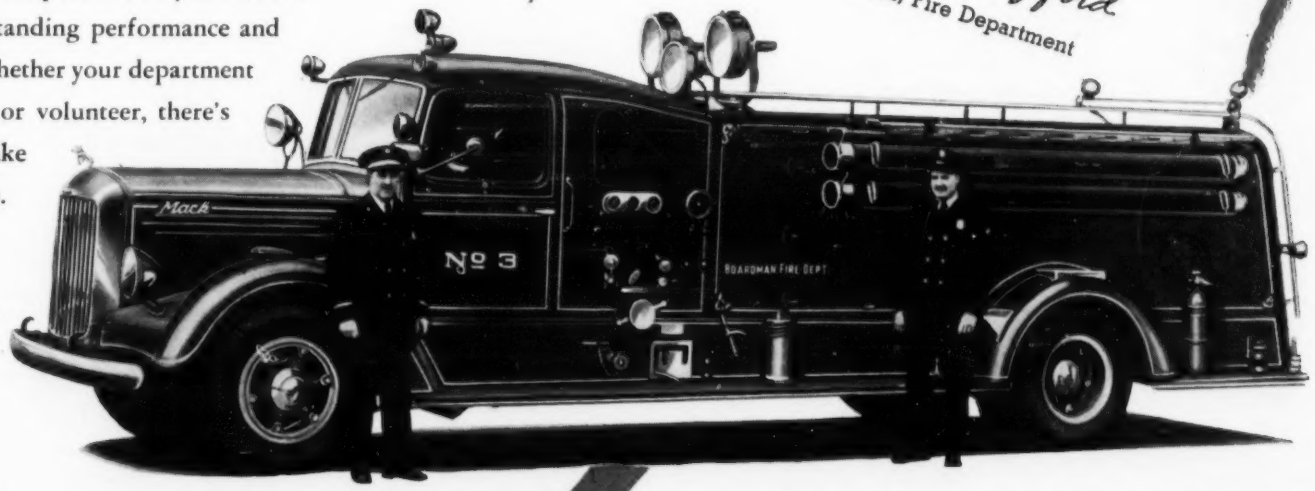
Chief, Fire Department



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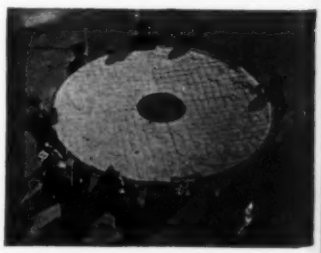

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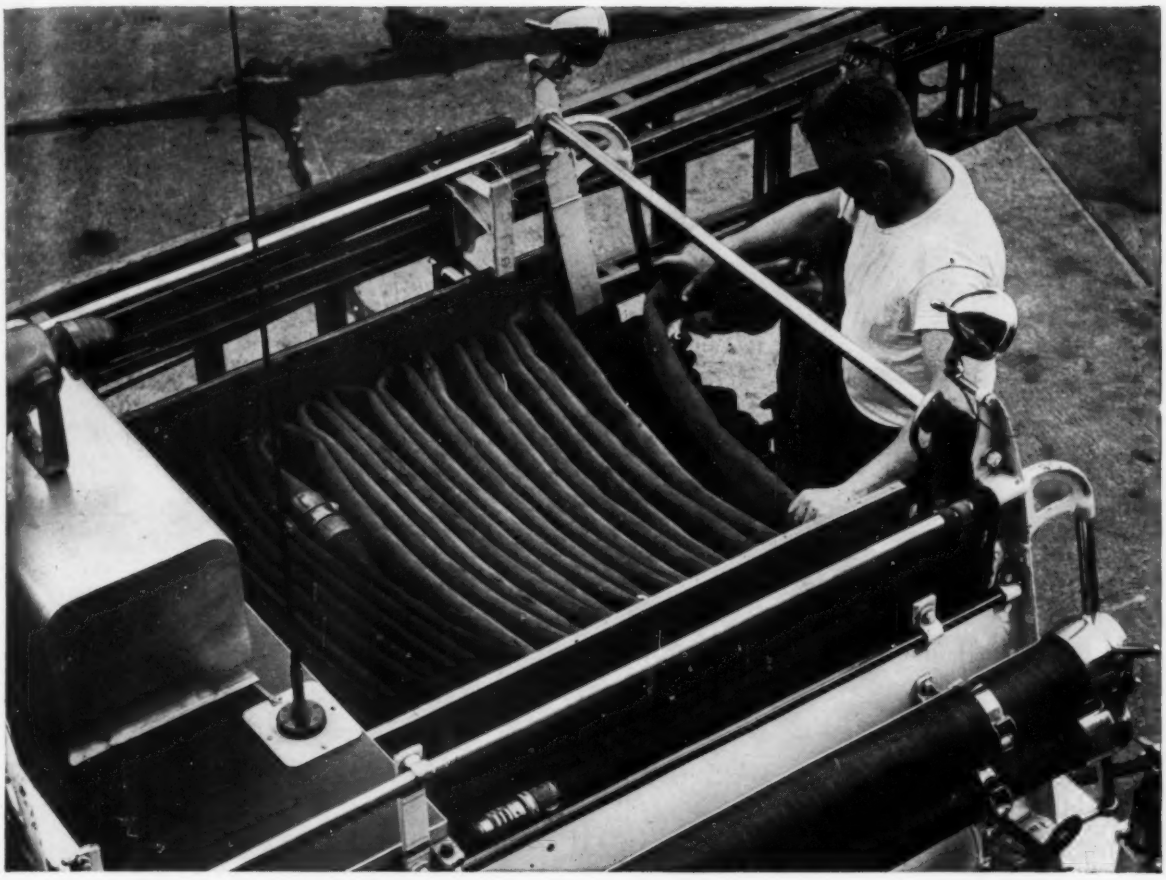

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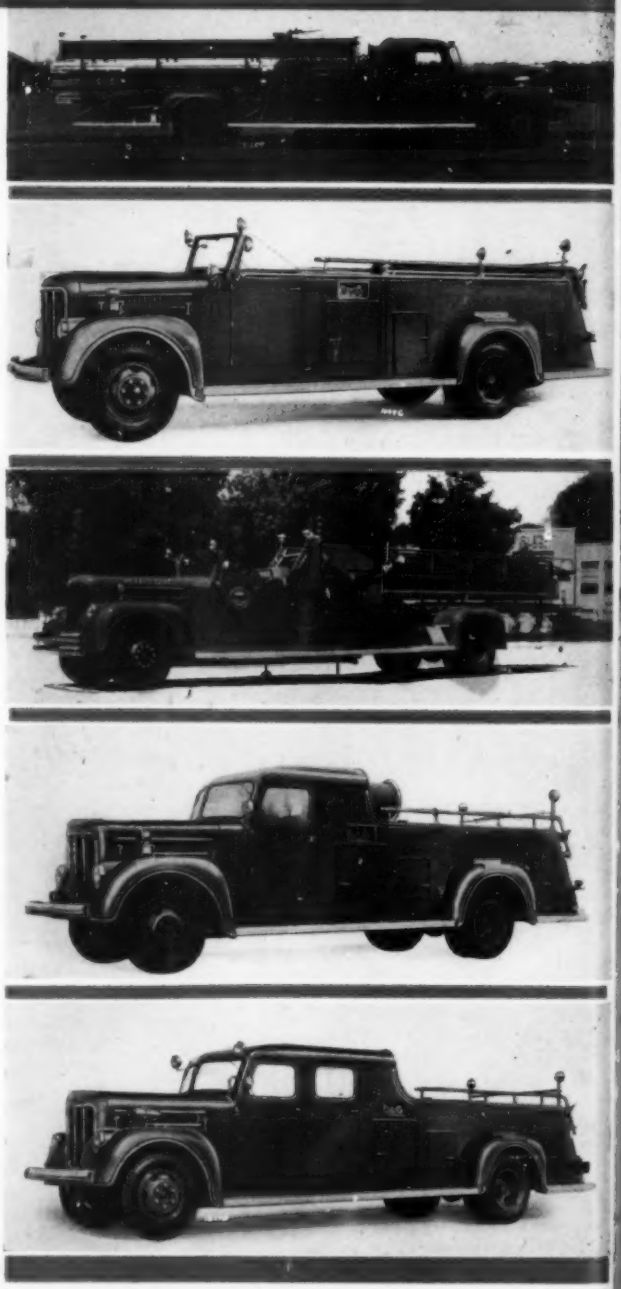

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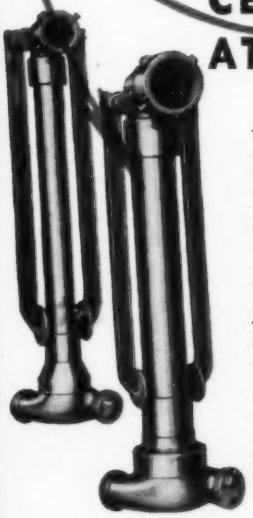

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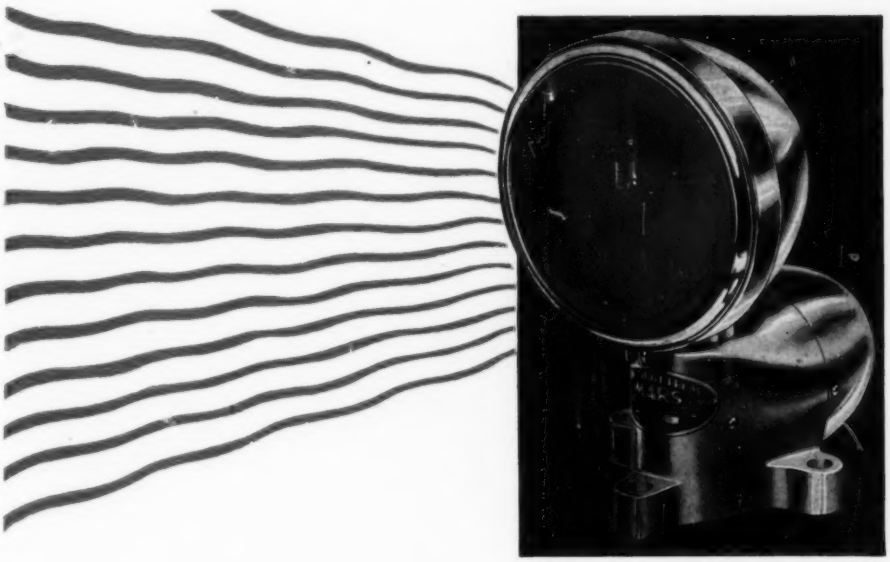

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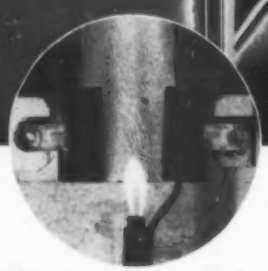

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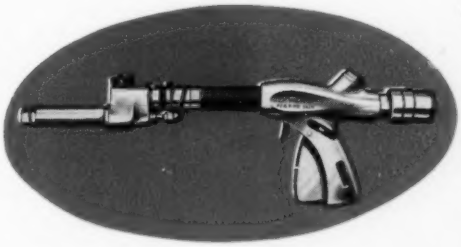

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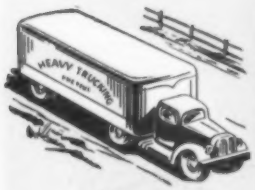

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Wasting Minutes!
Wasting Mileage!
Wasting Money!

Equip Your Fleet with Federal's
MOBILE 2-WAY FM RADIO TELEPHONE

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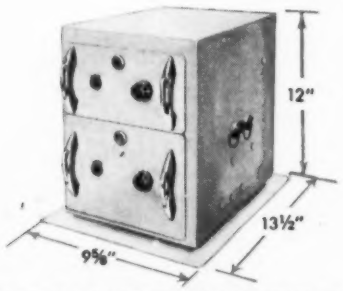

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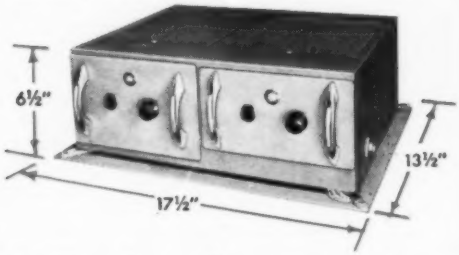

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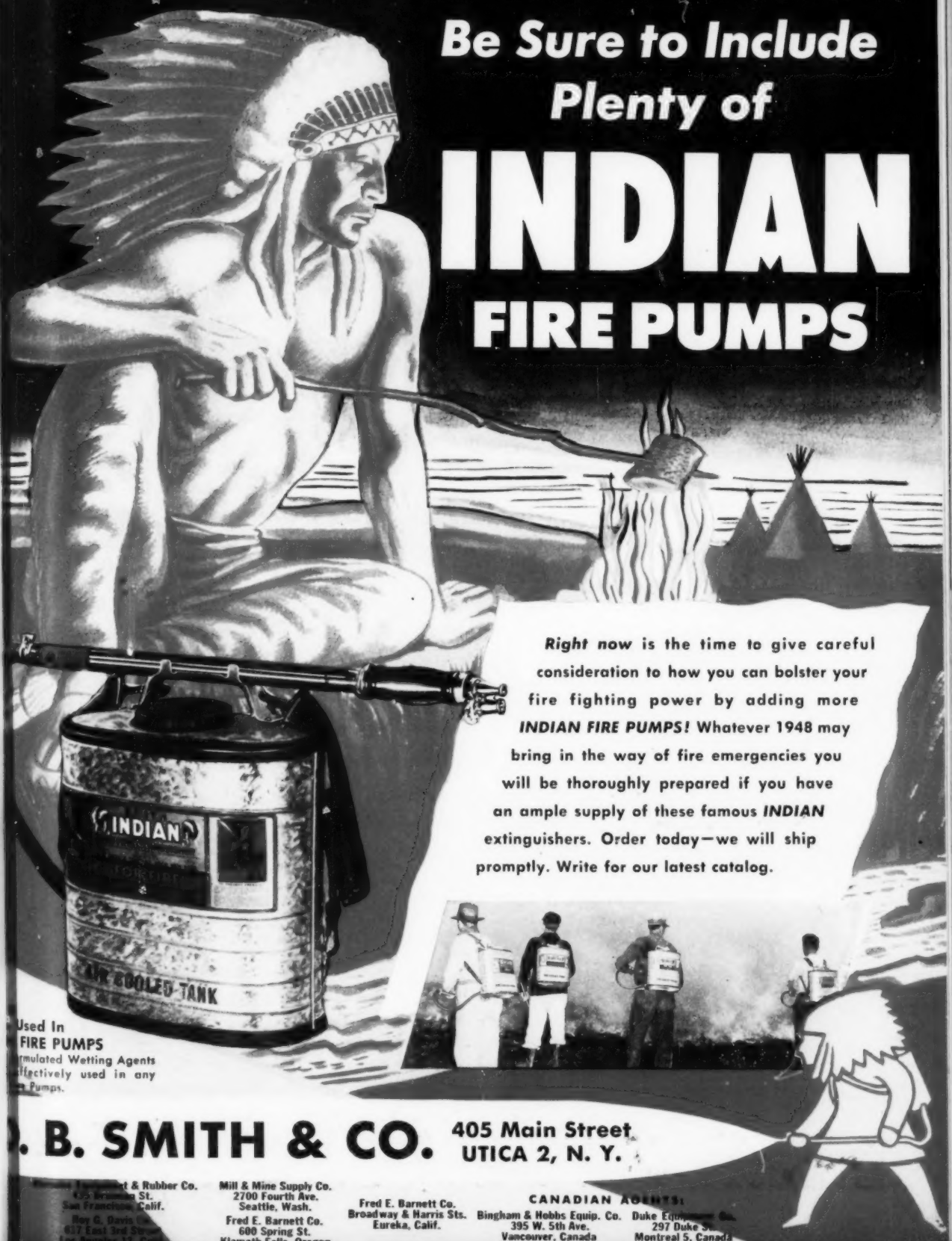
If You're "COOKING UP" your FIRE FIGHTING PLANS for 1948

Be Sure to Include Plenty of

INDIAN FIRE PUMPS



Right now **is the time to give careful consideration to how you can bolster your fire fighting power by adding more *INDIAN FIRE PUMPS!* Whatever 1948 may bring in the way of fire emergencies you will be thoroughly prepared if you have an ample supply of these famous *INDIAN* extinguishers. Order today—we will ship promptly. Write for our latest catalog.**

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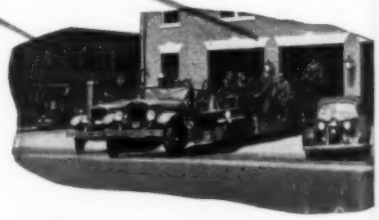

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JANUARY, 1948

FIRE ENGINEERING

Vol. 101. NO. 1

With the Editor

Contingency Fund

Fire protection is a science and a business these days; besides being a bit of a chemist, hydraulic engineer, lawyer and building specialist, today's fire chief must be something of a business man.

The business the fire chief directs—and in many cities it is big business—is a very real entity in the civic life and welfare of his community. It is directly connected with its civic progress. About the first thing that an industry or business, or even a new resident, wants to know about a community in which it, or he, plans to live is: what about local fire protection, and the fire department?

As this journal has so frequently pointed out, a progressive, efficient fire department not only builds good will, but it may actually create new business, new revenue, for its community.

The more progressive and civic minded the fire chief is, the more he is called upon to help promote his community, to perform services and meet demands beyond the call of duty. The more of this work he takes on, the more valuable he is to his community, but the more it costs him in time, trouble, and money!

This message is concerned primarily with that detail of cost!

Every fire chief knows how often he is called upon to participate in local civic or private functions: banquets, receptions, rallies and so on. Or it may be a speech before some charitable or educational organization where he all-too-often is expected to pay his way as well as give his time. Then there are the trips and visits necessary in the interests of better firemanship training and departmental administration, and the entertainment of visitors to his town, all of which usually cost the chief much more than he ever gets back from his local guardian of the exchequer.

In a very few cases, local governments have seen fit to demonstrate their appreciation of the fire chief's extra curricular duties by setting up funds upon which he can draw as occasion demands. The cases, however, are about as rare as the proverbial hen's teeth. For the most part, if a chief ever hopes to get any return for such investment there is so much red tape that the chief usually prefers to assume the obligation. And sooner or later, the chief finds it necessary to turn thumbs down on all but the most personal of these extraordinary demands. He isn't "at home" to visitors; he passes up business meetings and conventions, and develops, of necessity, the regrettable faculty of being some place else, whenever it looks like he is going to be wanted.

All of which adds up to this: If the budget of the fire department does not include an item, or items, for this very essential fire service business promotion—we might as well call it public relations work—then either the budget should include it, or the community should provide the funds in some other way, strictly from the viewpoint of good business for the municipality.

In the average community it should be possible to handle these obligations through a contingency fund, lacking any other accounting classifications. Certainly no civic official, financial or political, deliberately wants to see his community and his fire department handicapped through failure to provide for this minor, but important, item of promotion. Certainly, if these officials desire it, they can provide the means, and justify the investment in the eyes of their constituents and taxpayers. It costs the fire chief enough these days just to make both ends meet, without expecting him to lay out still more money "out of pocket."

Fred Shepperd

Technical Fire Fighting Service Proposed as Defense Measure

Chief Edward E. Wischer, Milwaukee Fire Department, Offers Plan for Integrating Fire Service with Government Defense*

WE need go no further back into the history of the United States than the treacherous attack on Pearl Harbor, December 7, 1941, to reveal that our nation was not properly prepared to fight wartime fires. That attack was initiated by the use of explosives which in themselves were the cause of death and destruction of property; however, the resulting fires caused even greater damage to military and naval installations, planes, hangars, ships, docks, cantonments, as well as civilian property in the vicinity. In a matter of seven to fifteen minutes, complete barracks and cantonments were devoured by flames due to a lack of adequate fire protection.

Fire-fighting facilities at our various military installations at the time of the Pearl Harbor attack were wholly inadequate, but this tragedy awakened us to the necessity of building up these fire defenses. Consequently, the Federal Government requisitioned fire apparatus from the various manufacturers, although it was intended for municipal fire departments. Naturally, this struck a serious blow to the efficiency of municipal fire departments in the United States, creating a major problem for the Fire Chiefs who were delegated with the responsibility of providing adequate fire protection, particularly in cities of a highly industrial nature.

Pearl Harbor marked the advent of a new era in the annals of warfare and the initial experience of air attack on American soil; (and it found us woefully unprepared and incompetent to cope with this new hazard). This experience would indicate the need of preparedness now so as to avoid a repetition of this unfortunate circumstance, and assure proper and adequate fire protection for our property, be it military, naval or civilian.

One of the first steps to be taken to accomplish this, is to have the fire fighting profession properly recognized as a vital factor in the security of our nation. A trained firefighter cannot be produced overnight—the records will bear out the fact that it takes at least five years of training and practical experience. This is approximately the same period required to earn a degree as lawyer, dentist, engineer—or to become a journeyman in the carpentry, toolmaking, and other highly skilled trades. The average cost for the first year of instruction of a rookie firefighter is estimated at $5,000 for metropolitan fire departments, and this investment should be protected.

In time of war the profession of fire fighting should be so recognized and the drafting of fire department personnel be made from a pool of professional firefighters, for assignment to such specific duties in the various branches of the services. This pool of professional firefighters can best be made up of fully qualified men from the municipal fire departments in the United States, but the communities should be given assurance that not more than twenty per cent of the personnel of any individual fire department will be taken into this service and that adequate coverage will be assured for all communities.

The proposed reserve supply of trained firefighters to be available in time of emergency is comparable to the active reserve units of the various armed services as well as the National Guard units located in the states of the Union. In time of emergency, National Guard and Reserve units are relied upon by the active duty personnel of the armed services of our country to provide the nucleus of a full wartime service force. Because of their background of training and experience, they are given commissions and ratings, and placed in responsible positions in our country's defense program. The firefighters in the United States are also a trained and experienced force upon which the general welfare of the country relies, and in time of war their services are even more valuable, and should be so recognized.

All such moves toward preparedness and safeguards should be made during time of peace, and should cover other fields in addition to the establishing of regulations to provide for the drafting of civilian firefighters. A determined effort should be made to create a unit which for want of a better name could be known as "The United States Technical Fire Fighting Service," to have supreme control of all fire fighting and fire prevention programs in the armed services, whether it be Army, Navy, Marine, Coast Guard, or Air Corps.

This proposed United States Technical Fire Fighting Service should be established with proper specialist ranks for all grades of work connected therewith, comparable to those in all other armed services. The head of this unit should be a recognized man in the field of fire fighting and fire prevention, augmented by a sufficient number of additional outstanding men with fire fighting and fire prevention reputations as may be necessary to adequately handle this large and important service. The personnel making up the actual fire fighting units in the various services to be composed of regular personnel from such services who have enlisted or been drafted from the pool of firefighters and hold specialist ratings of a grade commensurable with their duties.

With the creation of such Service, all fire fighting and fire prevention methods and practices would become uniform in our armed services. This is a most important factor, and one that requires particular emphasis.

Standardization Urged

Fire is an element that knows no boundaries, whether of human origin or whether fashioned by nature. This circumstance leads to the natural conclusion that fire fighting and fire prevention work must likewise be of a universal nature. All fire departments should be ready and willing to assist neighboring fire departments—and all departments should be properly equipped and trained so that this assistance will be practical and effective. To this end it is urged that all fire fighting apparatus and equipment be standardized so that it could be used by neighboring departments interchangeably, thereby avoiding any delay in combatting the mutual enemy when necessity demands. At present, in most instances the fittings, hose, threads on connections, and connections, are not of a single pattern, which fact alone virtually eliminates any practical benefit from aid offered by surrounding departments in cases of extensive fires.

Any program of standardization of fire apparatus and equipment naturally falls within the province of Federal Government regulation in order to be effective on a national basis. Incorporated in this Federal regulation there should be further controls to eliminate the purchase of inefficient, worthless, and unsuitable fire apparatus and equipment. At present there are communities whose security is based on apparatus and equipment which is absolutely of no practical value, because the apparatus and equipment was not suitable for the needs of the purchasers or because it was bought with insufficient knowledge of all the factors involved. Regardless of the particular reasons, however, the residents of such communities are living in false security, and their property is a potential source of catastrophe.

Standardization of training methods in fire fighting and fire prevention is a necessity and should be provided for in a Federal program. This program would realize the thoughts advanced by President Truman at the recent Fire Prevention Conference at Washington. President Truman advocated the practice of fire prevention on a year 'round basis in order to reduce the tremendous losses of life and property from fire. These losses in 1946 reached an all-time high.

The program for the standardization of all training methods could easily be carried out through the establishment of Federal Training Centers in various areas of the United States. At these Centers, standard practices would be taught to the instructors of the fire departments within their designated areas,

*Paper presented before Wisconsin Fire Chiefs

who in turn would bring these practices to their local communities. There are but three methods of contending with the danger of fire, regardless of where fire may be encountered:

I. Efficient fire prevention programs to prevent inception.
II. Cooling burning material below its ignition point.
III. Smothering the fire.

The various methods to be used in applying the foregoing principles would be taught at these Centers, including fundamentals of the use of equipment and apparatus of a fire department. In addition, all necessary fire department sciences would be a part of the course, embracing construction methods and materials, exceptional hazards, methods of attack, hydraulics, and other related subjects.

Proper basic instructions are an important asset to the novice in facing his baptism of real fire fighting. The practical experience he receives under the guidance of his officers and co-workers is the real education. Through practical experience the men learn that fire fighting is an assignment requiring efficiency, precision and dispatch—allowing little time for study or debate as to the best methods to combat the enemy. A quick survey upon arrival at the scene must suffice and the work of extinguishment begun immediately. An old adage of firemen that "attack in the first five minutes of the fire will save five hours in overhauling" holds true because immediate attack prevents the spread of the fire and permits quick confinement to the area of origin.

The writer does not wish to imply that no fire fighting or fire prevention programs were engaged in by the Armed Services, but desires only to point out that they were not sufficiently forewarned and prepared for the type of emergency presented by the new types of warfare, as proven by the disaster at Pearl Harbor.

Fire Service Not Wisely Used in War?

The Navy's fire fighting school at Great Lakes was observed in action, and its program was very fine, but in some respects it was a case of locking the barn after the horse was stolen. The instructors at Great Lakes were men from the fire fighting services, but the men under their supervision, who would be given individual responsibility to a great degree after a short course of instruction, in nearly every instance were novice firemen. Many had never even seen a piece of fire hose, or handled any fire fighting equipment—but the instructors were trying to make firemen out of them. However, at the same time experienced firefighters had been drafted from the fire departments of the country and assigned to duties other than that which they had performed as civilians, for which they were trained and qualified. In the case of the 153 men entering the armed services from the Milwaukee Fire Department, a check revealed that forty-four served in fire fighting units, or approximately 25 per cent.

Extensive wartime fire fighting training would naturally be a slow process, but could be avoided with the proper fire fighting program in effect, whereby trained men would be taken from a pool of firefighters throughout the country and given a brief period of intensive training in the types of fires to be encountered, or anticipated from war hazards. They would not require the long indoctrination of a novice, as their background of training and experience would give them the necessary fundamentals and personal confidence in approaching fires and attacking them, and would give our country an efficient fire fighting force in the shortest possible time in the event of a national emergency.

The proposed United States Technical Fire Fighting Service would also be the responsible authority for the correlation of fire fighting programs between the local fire departments, the citizens, Civilian Defense bodies, and other interested agencies, similar to that program of instruction and training engaged in under the Civilian Defense program of World War II. A further responsibility which would undoubtedly devolve upon this Service would be the protection of war materiel and supplies, civilian goods, etc., being shipped and stored on an inter-state and international basis.

During wartime, the problems of fire fighting and fire prevention are not confined to the armed services, nor to protection against air attack. The Fire Chiefs have the additional problem of contending with increased hazards created by the speed-up in production in the industrial plants in their community. Such accelerated programs result in careless or hazardous installation of machinery and power supplies because of war necessity. Overcrowding of storage spaces of raw and finished material creates a further hazard, eliminating the effectiveness of sprinkler systems where installed, as well as hampering the work of the firefighter when fire does break out.

Hastily constructed manufacturing facilities, without due regard for safety factors, and manufacturing carried on in buildings not intended nor suitable for such purpose add to the possibilities of fire and increase the hazards native to industry. The owners and operators of these industrial plants, engrossed in the problems of production, often ignore fire prevention in their plants. A lack of properly instructed watchmen and fire brigades was found in our own community at the time the extensive production of war materiel was begun, which made the United States known as "the arsenal of the world."

Milwaukee County's Experience

The problems confronting the Fire Chiefs of Milwaukee County, who were responsible for the protection of a very vital industrial manufacturing center of the United States, soon became apparent, and a definite step was taken to combat the dangers by organizing the Milwaukee County Association of Fire Chiefs on March 5, 1941—more than nine months before the Pearl Harbor

(*Continued on page* 42)

Pets Nearly Cost Woman Her Life

Mrs. Charles L. Bishop of Minneapolis narrowly escaped death in her burning residence because of a stubborn tomcat. When the fire was discovered, Mrs. Bishop seized a pet dog under each arm but the cat refused to join the rescue. Mrs. Bishop finally had to flee without tabby. She is shown one jump ahead of death, holding one dog—the other having just leaped to the ground. The tomcat made its own way to safety.

Officer Cooperation, a "Must"

By CAPT. RUHL J. POTTS*

I BELIEVE that all of us agree that in order to have the best possible fire department, the following things are essential.

First, proper and capable administration. This is of course essential in all organizations. In business, the wrong type of administration may cause bankruptcy, and more often, a change in administration. In the fire service what is caused by having improper administration? The answer to this is of course a poor fire department, large loss of life and property and eventually, a change in administration.

Second, capable and efficient manpower and equipment. Many chiefs do not have the control of this part of the fire department as well as they would like, but I have yet to see a chief that would not like to have full control of the hiring, firing, and purchasing in the fire department. This part is a chief's problem and usually a local one, but I believe that honesty, integrity and hard work will overcome this problem to the extent that the chief's recommendations will be usually carried out and that he will have something to say as to who is going to be employed, or what kind and amount of equipment should be purchased.

Third, cooperation between chief officers and company officers. With proper cooperation between these two classes of officers the question never arises as to "It can't be done".

Cooperation: Webster defines this word as "to work together". The fire service operates as a football team, with the quarterback calling the signals, and your company officer is that quarterback. He is the man responsible for the smooth operation of that company, and I do not believe that anywhere in the fire service he is given enough credit for the responsibility of his job if he is a good company officer. Any time you show me a poor company officer, I'll show you a poor company.

Who is the coach on this team? He's the chief. He runs in the substitutes. He calls extra companies, directs the streams and the proper placement of equipment, men, ladders; directs rescue operations and, in general, is the hub of the wheel around which all companies operate. It is true that in many towns and cities the chief delegates much of his authority to subordinates, and in other towns he might be the cog wheel. But regardless of what he might be, if something goes wrong in any town, the chief is sure going to get the blame. Now how do you keep this from happening in any department, big or small? There's only one answer, and that is by cooperation.

Building a fire department is just like going out to sell a merchant a bill of goods. You first have to be honest with yourself, honest to people that you are working for, be absolutely sold on your merchandise, and must be better informed that the men working under you.

Cooperation is a thing that is not developed overnight or in a year or so. It is something that has to be cultivated; it cannot be demanded, and some never get it though they make an honest effort to do so. The first qualification for cooperation is honest and capable leadership. In order to get cooperation and respect, a chief must be qualified and well grounded in fire fighting principles. Though he may differ from other chiefs in some procedures, he must always, employ basic principles and be well grounded in them, because disrespect is more often caused from a chief not being qualified for his job than anything else.

Leadership on the drill ground, in the office, and at fires is where cooperation is formed. See that every man gets a square deal and, don't forget, any time the "old man" goes in on a rough one you don't have to worry about the lines coming in after him. But suppose that we have a man with all these qualifications. How is he going to get the right cooperation right down the line and from all the department. You are only going to get it through your company officers and through your selling yourself to these company officers.

This company officer, if he is selected through proper qualifications, and most of them are, has the respect of the members of his company. He eats, sleeps and works with them, and if he is any good at all, should command their respect.

His personal views on matters carry lots of weight with his men; and how is he to be guided and informed on all matters pertaining to the department unless he is informed on them through the right channels. Just this one thing, in my opinion, is the weakest link of most fire departments. There is never the close connection between chief officers and company officers as there is between chief officers themselves.

It seems that the chief officers set themselves up above others in a class by themselves, not intentionally, but more through their position, responsibility and the requirements of their work. I don't mean by this that you should buddy with your company officers and ask them for advice on all matters. But you evidentally thought they were good enough to command a company and to be your personal representative at fires, so don't you think that they are good enough men to help you make your job easier, and often give you some worthwhile ideas. Is our job just to put out fires and go back to the station and play dominoes? Twenty-five years ago this might have been the case, but today the fire departments are expected to take their rightful place in the affairs of the community. A progressive fire department is expected to prevent fires by inspections, educating the public against fire hazards, work on civic drives such as your community fund, the Red Cross, Y. M. C. A. and others.

And as years come to pass, many other demands will be made on the fire service. Why? Because you have an organization, and it is going to be your job to keep an organization that can function in these community affairs. Now all of the grumbling and rumor in your department is caused by men not being properly informed on matters concerning them. You can put out an order or bulletin, word it very carefully, and I'll bet you that by the time fifty firemen read it you'll have at least ten different versions of this order or bulletin.

Where is the place to correct this? My suggestion is to have regular company officers meetings, or "stag" or get-together, where you can let your hair down and talk "shop". Discuss your problems with them, let them know your opinions, get theirs, and before long you will have such a closely knit organization of officers that you cannot help but get cooperation from every one of them, and in a manner that will surprise you.

The point I am trying to get over here is this: Your department is going to be just what you make it. Remember, you don't hire fire departments, you build them.

* Oklahoma City, Okla., Fire Dept. Excerpts of paper presented before convention at Southwest Association of Fire Chiefs.

Northern Virginia Firemen's Association Formed

Delegates from fourteen northern Virginia counties met in Luray, Va., December 12th and founded the Northern Virginia Firemen's Association. During the one-day session a constitution and by-laws were adopted and Luray, Va., was selected as the convention site for 1948.

Officers were chosen for a term ending in June, 1948 and four members of an executive committee with terms running from one to four years were also elected. Those elected were: J. E. Will, Luray, Va., president; Chief F. A. Stantmyer, Front Royal, vice-president; W. F. Brittle, Warrenton, secretary; Chief L. S. Armentrout, Harrisonburg, treasurer; Chief S. G. Russmissell, Waynesboro, chaplain. Besides the officers, the executive committee consists of: W. N. Gochenour, Winchester; Chief L. M. Acpee, Gordonsville; J. S. Clark, Bridgewater, and W. G. Lemley, Strasburg.

W. F. BRITTLE

Fire Protection Course at New York University

The Graduate Division of the College of Engineering, New York University, New York City, is offering a graduate course in fire protection engineering primarily designed so that engineering graduates will be fire conscious in the practice of engineering. Mr. Edward J. Kehoe, Fire Marshal, Third Naval District, is the lecturer.

The group meets on Friday nights and the course is ordinarily open only to college graduates. Registration for the second term will take place January 26-29, 1948, 6:30-8:30 P.M., Room 104, South Hall, University Heights, Bronx, N. Y.

G. I.'S AND GERMAN FIREMEN FIGHT HIGH FOREST FIRES

Serious Mountain Blazes Near Mittenwald, Bavaria, Tax Efforts of Combined Forces

By Bernhard Peill

EDITOR'S NOTE: This country was not the only one to suffer severe forest fires last fall. Among the other nations forced to rally its fire control forces on a wide scale was Occupied Germany.

The following description of the manner in which a threatening forest fire, high up in the Alpines was fought by regular and volunteer Bavarian firemen, aided by American-made equipment and United States Army personnel, is taken from a letter to the editor from long-time correspondent of FIRE ENGINEERING, at present residing in the U. S. Occupation Zone.

SERIOUS forest fires broke out in the month of September, 1947, in sections of Bavaria. These were aggravated by the prolonged drought which existed almost from Easter and were no doubt caused by careless smokers or camp fires of wood cutters. Although the majority of those fires which occurred in the less mountainous forest and field areas were brought under control by combined American and German operations, fires in the more mountainous regions posed more difficult problems in fire suppression.

One such fire, near the small town of Mittenwald, situated between Garmisch-Parsemkirchen where there is located the large recreation center of the American occupation forces, and the Austrian frontier, threatened the whole mountain district. In order to control this blaze fire forces were dispatched to the area from distances of 100 to 300 miles. Men and apparatus, including professional and volunteer firemen, from Munich, Nurnberg, Regensberg, Schweinfurst, Landshut, Kempten and other Bavarian cities and towns, including Memminger, were thrown into this struggle, in which they were aided by equipment and men of the United States Army.

Left: A Portable Pump Is Carried by Volunteer Firemen Across the Rocky Mountains Up to the Burning Forests. Right: Young Volunteer Firemen Drawing and Pushing Their Trailer Pump Up to the Fire Area.

Wood Is Priceless in Bavaria

To the uninitiated, the concentration of fire fighting forces to extinguish fires in rocky mountainous areas might seem poor strategy. But to those familiar with those areas, and the conditions under which the people live, the necessity of quickly extinguishing fires in forest and field, with minimum damage, is imperative. Timber and kindling represent the main, if not the only, riches of the country. Further, the fertility of the valleys depends to great extent upon the water that comes down from the mountains and this, in great measure, depends in turn upon the forests and other ground cover. That is why no time was lost in calling for all the help believed necessary to overcome the fires that started during September's dry weather near the tops of the mountains, at heights of 3,600 to 5,000 feet, and over an area extending approximately 2,400 to 4,800 feet from the Ysan River, nearest available adequate source of water supply.

Fire Gaining Headway Beneath the Rocks of the Alpine Peaks and Summits, About 5,000 Feet High.

Unlike the serious forest fires which had broken out around Nurnberg and which had been brought under control chiefly by the aid of United States Army mechanized equipment, caterpillars in particular, the mountainous fires had to be fought under different conditions, using different methods. The powerful but large and heavy caterpillars were limited to drawing pumpers and trailer pumps from the mountain valleys up the grades to the high peaks and summits. It was impossible to use mechanized trench-cutters and bulldozers in the rocky terrain, in fact, the

use of even hand tools, such as picks and shovels, was almost as impossible. The fire could only be fought by means of hose streams, as powerful as could be brought to bear on the burning area.*

To get water onto the fire it was necessary to bring all sorts of pumping equipment and hose into action. The heavier pumping units were located on the banks of the River Ysan which flows to Munich, and 3-inch hose was led up the mountains to portable canvas tanks supplied by the United States Army. Portable pumping units then drew water from these containers and delivered it, through lighter hose, either directly on the fire, or used it to supply, in turn, the still smaller portable pumps known in Bavaria as "porto pumps". This particular pump is a 3-H.P. type, manufactured by the Albert Zeigler Company at Giengen-Brens. This firm dispatched a dozen of these new, light units to the district when the need became known. The pump, although capable of delivering 25-30 G.P.M., is light enough to be carried by one or two men.

Officers and soldier personnel drawn from the United States training school for fire fighters at Murnau near Oberammargau, scene of the famous Passion Play, fought shoulder to shoulder with Bavarian firemen—regular and volunteers, and other personnel recruited at the scene. The Bavarian firemen had their headquarters in Mimenwald hotels, where fatigued off-duty men ate and slept before again taking up the fight. On-duty personnel was lodged in camps, not far from the forests that were on fire.

The German firemen were greatly interested in the operation of the American fire fighting equipment, drawn from the training school. This was new to most of them. They were equally if not more interested too in the possibility of securing the stomach-filling refreshments which were the regular ration of their more fortunate brother firemen from America.

During the fire in question, not less than 700,000 feet of hose were reported used, while large quantities of fuel were required to operate the pumpers, and automotive equipment. Operating on fires at high altitudes is enervating on the human system, while it sometimes plays tricks with the working parts of mechanical equipment. The problem of supplying food and fuel to the front lines in such advanced and elevated positions is also serious. According to reports received on this fire young, volunteer firemen ranging from fourteen to eighteen years of age, were employed in considerable number, and are said to have rendered the best services in spite of the handicaps of food shortages under which they had been living.

The Fire Brigade of the Bavarian capitol during its operations reached a height of 5,700 feet in the struggle to control the stubborn fire. Here, trained Alpinists had to be utilized in order to make further successful advances. Firemen from the lower district carried on as long as their endurance permitted.

* According to FIRE ENGINEERING's correspondent, "the American method" of fighting forest fires by means of wet water and fog has not yet been introduced into Bavaria and water streams were required in order to extinguish the burning trees and brush.

COLLAPSE OF BURNING BUILDING KILLS TWO FIREMEN IN NEW YORK

Walls of Loft Building, Weakened By Fire, Fall and Trap Several Firefighters

TWO firemen were killed and two, one a captain, were critically injured in the collapse of a fire-weakened five-story loft building at 334 East 94th street, near First avenue, Manhattan, New York City, on the night of November 28.

The dead firemen were Howard C. Wynn and Jacob Bassman, both of Ladder 26 which responded on the second of the five alarms sounded. The injured men are Captain William De Pietri, and Charles Thompson, both of Ladder 26.

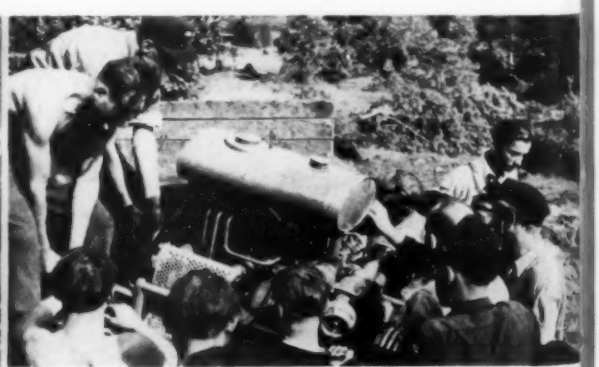
The building, said to have originally served as an ice manufacturing plant, having double cork insulated wall, was occupied at the time of the fire by the New York Plumbers' Specialties, Inc. The rapid spread of the fire, of undetermined origin, is attributed by Chief Fire Marshal Thomas Brophy to the presence of this dried-out cork, and the wooden flooring and other combustible material within the structure. According to Julius Klein, president of the company, no combustible materials were stored in the building.

How long the fire had been burning before it was discovered is not known, but the Manhattan Telegraph Bureau received the first alarm at 7:41 P.M. Two men, a watchman and a truck driver, were said to be in the building at the time of the fire and they turned in the alarm.

According to Captain De Pietri, four men were on the roof or upper floors of the building when the west wall and roof suddenly collapsed and hurtled them into space. The Captain said the fire was burning only on the ground when they arrived but it spread with great rapidity through the upper floors and soon burst through the roof with a roar. He said that Fireman Wynn, whose body was recovered ten hours later, after members of Fire Department Rescue Squads 1 and 3 cut their way through walls and debris to reach him, was standing about twelve feet from him on the roof when the cave-in occurred.

Captain De Pietri and Fireman Thompson were pulled out alive after three hours of digging by rescuers.

The wall and roof collapsed about 8:10 P.M., only twenty-nine minutes after the first alarm was turned in. When the walls caved, and mindful of the disaster of a year ago which killed almost forty persons when a burning ice house caused the collapse of a tenement at Amsterdam avenue and 184th street, officers of the fire department ordered the evacuation of thirty-seven families living in two adjacent tenements at 1889 and 1891 First avenue. Their removal was directed by Commissioner Fielding of the Welfare Department. Operations of the fire force were directed by Fire Commissioner Frank Quayle, who arrived on the third alarm, and Chief of Staff and Operations Frank Murphy. Special detachments of police were employed to control and reroute traffic which was cut off on the busy East River Drive and First avenue by hose lines.



Left: Portable Pumper Stream Is Played Upon the Burning Trees and Brush. Right: Portable Pumping Unit Being Taken from Transportation Truck

Photo by Bill Herries

Five-Alarm East 98th Street Fire After Collapse of Walls and Floors

Although the fire was reported under control shortly after 11:00 P.M., the ruins were still smouldering fifteen hours after the start of the blaze, with only the north wall standing. Rescuers digging for the body of Fireman Wynn hours later encountered fires that continued to break out in the wreckage.

The chronology of alarms and dispatching of equipment was as follows:

7:42 P.M.—Box 1248 First ave. and 98th st. E. 53, 91, 22, 78 (boat); L. 13, 43; Chiefs 10-11 batt.

8:00 P.M.—2-2-1248 (second alarm) E. 35, 44, 58, 76, 87 (boat); Rescue 3; L. 26; Chief 4 div. (two engine and two ladder companies re-locate).

8:12 P.M.—3-3-1248 (third alarm) E. 39, 36, 60, 56, 232 (boat); L. 22; Chief 14 batt. (three engine companies re-locate).

8:13 P.M.—9-1248-4 (water tower 4).

8:28 P.M.—4-4-1248 (fourth alarm) E. 47, 83, 74, 37, 8; Chief 8 batt. (three engine companies re-locate).

8:34 P.M.—9-1248-3 (water tower 3).

9:02 P.M.—5-5-1248 (fifth alarm) E. 41, 59, 80, 69, 16, (one engine company re-located).

9:29 P.M.—7-1248-14 (ladder 14).

9:31 P.M.—7-1248-40 (ladder 40).

9:45 P.M.—10-1248-1 (rescue 1).

In the above period, the Manhattan Telegraph Bureau transmitted two other box alarms and one still alarm. Later, at 10:11 P.M., Box 90 (Front and Beekman streets) was sounded for a fire that required operations of all companies responding. At 10:47 P.M. box 1097 (Fifth ave. and 80th st.) was pulled. Some of the companies responding to this alarm were among those relocated in fire stations vacated by companies operating at the 98th street fire.

The fire boats located at 98th street and the East River, supplied powerful streams from water tower and deck guns, aiding the batteries of pumpers operating on the low pressure water system (Manhattan's high pressure system extends only to 34th street).

Pigeons Rescued

Before the fire in the loft building had gained headway, youths of the neighborhood dashed through the smoke to rescue about 90 of 190 prize-winning pigeons housed in four coops, two on the roofs of the tenement and the others on the roof of the burning building. The rescuers, who found about 90 of the birds already suffocated, ran up a tenement stairs to gain access to the roof and removed the still living birds in burlap sacks.

The loss on building and contents was estimated at $500,000.

Blaze on U. N. Site

Said to be the fourteenth fire on the Manhattan site that will ultimately house the United Nations since demolition of old existing structures was started, a spectacular three-alarm blaze completed the destruction of a partially razed building December 4, 1947.

The fire did little actual monetary damage, but caused some alarm in the neighborhood, on Manhattan's East Side, showering an area between the East River and Second avenue with sparks, and ultimately bringing about thirty pieces of apparatus and three fireboats to the scene.

As was the case with similar fires at the site, to which the fire department had been called in the past few months, this blaze apparently was set off by sparks from an acetylene torch used in cutting steel framework earlier in the day. The blaze evidently smoldered until 10:45 P.M., when flames were spotted by a night watchman, who turned in an alarm from Box 791, at First avenue and 42nd street.

The chronology of alarms and normal responses to this fire were as follows:

10:45 P.M.—Box 791, E. 21, 8, 65, 16; 232 (boat), L. 2, 7; Chiefs of the 8-9 Batt.

10:46 P.M.—4-791-6 (Ch. 6th Batt.).

10-52 P.M.—8-2-791 (second alarm), E. 26, 54, 39, 2; 66 (boat); Rescue 1; L. 24; W.T. (tower) 3; Chief Div. 3 (five engine and two ladder companies changed locations on this alarm).

10:52 P.M.—5-791-5; 5-791-14 (E. 5 and 14); 7-791-3 (L. 3).

11:08 P.M.—3-3-791 (third alarm), E. 1, 14, 5, 34, 23; 77 (boat); L. 4; Chief 7 Batt. (three engine and one ladder companies re-locate).

Irked by the succession of fires in the U.N. area, and having in mind the numerous similar blazes in other East Side areas (some of which went to four alarms) during the period of wrecking old structures preparatory to large scale housing developments, Fire Commissioner Frank Quayle issued an order for revocation of the wrecking company's permit to burn debris on the spot. The Commissioner pointed out that in a fire four weeks before, at the U.N. site, fourteen firemen were overcome. He said the same wrecking company had a record of sixty fires when it was razing old buildings to make way for Stuyvesant Town, huge Manhattan housing project.

Nearly a week's work by firemen was

Fire in Loft Building on East 98th Street, New York City, in Its Early Stage

required to extinguish the last ember of this fire, which fed on the combustible materials (including cork insulation) of a half-demolished slaughterhouse. During the first twenty-four hours of the fire operations, vehicular traffic on the busy Franklin D. Roosevelt Drive and First avenue was detoured to avoid hose lines stretched across those thoroughfares.

EPIDEMIC OF RUBBER DUMP FIRES PLAGUES GREAT BRITAIN

Scattered Fires During Last Few Months of Unknown Origin, Cause Heavy Loss*

THE frequency of outbreaks of fire in dumps of ungraded, discarded rubber in various parts of the British Isles, endangering human life and causing damage to property and products, while presenting the NFS (National Fire Service) serious problems in fire control, are of grave national concern, according to reports reaching this publication from abroad.

Rubber in all forms is more valuable in Great Britain than it is in this country. Its storage in post-war 'dumps' has been entrusted to the Passive Air Defense Department, by the Ministry of Supply which, according to reports has never consulted the Fire Service on matters of protection against fire. In some parts of the country these dumps were located in areas where water for fire protection was lacking. Nor were there adequate security measures taken to protect the storages, it is said. The net result has been a number of major fires—all of unknown or questionable origin, that have robbed the nation of valuable rubber stocks.

The first of the fires occurred on October 27. This was at Limmer Wharf, Barking, Essex. Here, first arriving firemen found two stacks, one of baled wool and the other baled rubber, well afire. Spurred by a 48 MPH wind, the fire quickly involved other storage, while dense volumes of black smoke darkened the sky and made difficult adequate appraisal of the extent of the fire.

As the fire progressed, additional fire forces were summoned. Twenty pumps were put to work, but despite their efforts, the fire continued to spread, involving adjoining stacks and threatening factories, among them a paint manufacturing concern. The main building of this plant was saved but not before the total of pumps put in operation was increased to fifty.

Firemen operating at this conflagration were disagreeably handicapped by the flow of molten rubber, which gummed up apparatus, hose and even the firemen themselves.

After five hours, Commander C. P. McDuell, 36th Fire Force, in charge of the fire, had the blaze under control. The damage included many tons of rubber, wool, asphalt and resin, two buildings levelled, while eight, with their contents suffered varying damage. More than 3,000 man-hours of work by the fire service were devoted to this outbreak, while 750 gallons of fuel were consumed by fire apparatus.

Second Fire in Old Cattle Market

On November 3 the Camden Town fire station received an alarm of fire from a street box, for a fire in the old cattle market which was occupied as a storage place.

First arriving firemen found many tons of baled rubber fully involved by fire and a strong wind carrying the blaze to surrounding exposures.

Additional fire fighting forces were called, raising the number of pumps to five. This was soon increased to fifteen and efforts were concentrated on preventing the fire from crossing a road on the leeward side and involving a warehouse. This effort was successful, but complications developed at another sector of the fire front when molten rubber, boiling and burning, threatened to flow into Market Road, a main thoroughfare.

The number of pumps was then increased to twenty-five and ten heavy steams were concentrated on the molten mass. Meantime, in Yorkway, on the windward side of the fire, eighteen other streams were operated from roofs and the rear-yards of a row of private homes.

The combined assault of this fire force controlled the fire after a five-

*The editors are indebted to Fire, the Official Journal of the British Fire Service, for material upon which this account is based.

Fifty Pumps Fight 4-Acre Rubber Blaze at Barking, Essex, England

Firemen from a wide area required to work 3,000 man-hours to extinguish threatening costly blaze, the first of several of "unknown origin" to occur in British rubber storages.

British Firemen "Stick to Their Jobs" in Fact and in Deed

Molten rubber mirrors members of the NFS as they attempt to "pick up" after fire in four-acre rubber dump. Although much hose and equipment was damaged, firemen suffered few serious injuries.

hour struggle. Severe damage was done to several warehouses, and many tons of rubber stacked in the open also suffered. Some damage was done to private houses. Over 1,600 man-hours of work were clocked by the fire brigades on this fire, 320 gallons of fuel being used by apparatus.

This fire was marked by the enormous number of spectators, who at times jammed the area, interfering with the fire forces, before police reinforcements could gain control of the situation.

Liverpool Has Rubber Fire

Another serious fire occurred on the night of November 10 in a rubber dump in Sandy-lane, Hightown, near Liverpool, a farmland area on the borders of the 26th and 29th Fire Forces. Flames lighted the sky and firemen experienced great difficulty in reaching the fire ground, having to travel by circuitous routes, because the location of the blaze was about 1250 yards from the nearest main road, reached only by a narrow thoroughfare which was never designed to accommodate modern fire apparatus.

The nearest fire station, located three miles distant, received the call at 6:08 P.M. from the police. The dump involved, comprised thousands of old tires—additions to the dump having been made since the early days of the war. The tires were stacked in piles of about 30-ft. x 30-ft., varying in height from 10 ft. to 15 ft. and covering an area of approximately 600 yards by 120 yards.

The storage presented no hazard to surrounding property, the nearest house being located 800 yards away. Water supply was totally inadequate, there being only three hydrants and these located on a 4-in. main, about 500 yards from the dump. The only other water available was in the tidal River Alt 1½ miles away and a meagre supply in a small muddy stream running alongside the roadway leading to the fireground.

Upon arrival, the officer in charge of the fire found three storage stacks in the center of the dump involved and the fire, fanned by a stiff breeze, spreading rapidly. Additional pumps to the number of five were ordered, while efforts were made to fight the fire using water from the first-responding water-tender. A single stream was operated on the spreading blaze but this proved inadequate to stem the advance, and a relay was attempted, formed by the forces responding on the first call for aid. This provided a second stream, but this likewise made no impression on the fire, which continued to spread.

The number of pumps was increased to fourteen, and five hose-laying lorries were also called. However, as these units had to travel distances of from six to sixteen miles, considerable time elapsed before they were in position to relay water over a route little better than a cowpath. To complicate matters, the wind completely changed course and apparatus that had been favorably located in the early stages of the fire was threatened. This necessitated breaking and shifting hose lines and equipment.

The second relay could not prevent involvement of the entire dump and operations were then directed to preventing extension of the fire outside the area of the dump. The storage stacks continued to burn for days, despite heavy rains which at times soaked the area.

Approximately 4,000 tons of used war-period tires were lost. Seeking the cause, one report states: "It appears inexplicable that an isolated storage of approximately 4,000 tons of used war-period tires, fully exposed to all types of weather for a period of years, should in the early hours of darkness, on a rather windy evening catch fire and become a total loss."

This was not the sum total of fairly recent fires in rubber stocks, to plague Great Britain. On November 17 NFS fire forces from many parts of Essex labored to combat a fire in a large motor tire dump alongside the Chemlsford-Billercay road at Stock.

This dump, covering about eighteen acres, contained hundreds of tons of tires and many old motor vehicles, including ancient buses. Lack of water here, also, prevented effective attack on the fire, which spread rapidly. It was hours before the firemen could control the blaze, which continued to burn during the following day.

British Firemen "Take a Boating" Fighting Big Rubber Fire

Shielded by only a short section of wall ruins, NFS firemen fight to prevent spread of hot fire in four-acre rubber storage at River Road, Barking (Here's where the American type "spade" helmet would have provided more personnel protection).

WASHINGTON STATE COLLEGE PLANS STUDENT FIRE STATION

Three Selected Designs of Hoped-For Volunteer Fire Station at WSC Offer Interesting Ideas

EARLY in 1947, a program was evolved by Fire Chief Henry C. Kuehl of the State College of Washington, Pullman, Wash., assisted by William Crozier, to provide a suitable fire station for W.S.C. to be manned by students especially chosen and trained under a competent chief for the business of fire protection.

The forward step was considered advisable because of the growth of the college and consequent enlargement of the campus and especially the college farm buildings, and prefabricated buildings used as dormitories.

Although the administration of the college was not prepared to erect a new fire station at the time, it was considered advisable to proceed with the planning, against the day "when and if" the program could be carried out. And it was considered advisable to leave the architectural designing of the fire station to the students in Architectual Engineering, enrolled in third year Architectural Design.

The following account deals with the basic requirements for the "Fire Station for WSC" as laid down, to the students and illustrates the three selected plans and layouts taken from the many submitted. The winners of these plans, which took first, second and third prizes in the design competition, were selected by the Architectural Department of the College, Harry C. Weller, Associate Professor, and Fire Chief Kuehl.

The plans for the proposed volunteer fire station, to be manned by college volunteers, made provisions for the following:

1. The proper housing of two pumpers, one aerial ladder, one ambulance, and the chief 's car in connection with this apparatus room, the Chief's Office, Alarm Office as well as a Hose Tower were provided.

2. Adequate living accommodations for the thirty college boys who would man the station. This includes living room, dining room, kitchen and recreation room. It also includes proper study rooms and dormitory accommodations for the student crew.

A room for the cook was also provided.

3. The Chief's quarters consisting of living room, dinette, kitchen, and two bedrooms.

The site was indicated on blueprints given the students, and they were permitted certain leeway in adapting the plot to the station. It was requisite that the building should be 30 feet back from the street. The number of floors was not to exceed three and a partial basement was permitted. The following requirements were indicated—

1) APPARATUS ROOM: 1st floor. Size: approx. 64′ wide, 60′ long, 14′ ceiling. To consist of at least four 60′ long stalls at street level, each at least 16′ feet wide, fronted by some type of self-opening doors which are to be at least 12′ wide. Four poles from the 2nd floor are to be located between the 1st and 2nd and the 3rd and 4th stalls. Two are to be 15′ from the front of the stalls, and two are to be 15′ from the back of the stalls.

2) HOSE TOWER: 1st floor. Size 8′ square. Approx. 35′ high. To be located at the rear, on either side of the apparatus room with inside and outside entrances. Ventilation required. A perpendicular ladder inside the tower is required with a door at the top. Arms for holding at least 1,000 pounds of hose are to be located 30′ above hose tower floor. A catwalk three feet below hose arms inside tower is required.

3) COMBINATION STOREROOM AND WORKSHOP: To be located adjacent to the hose tower and apparatus room with connecting doors. Size: Approx. 15′ x 30′. Use: Hose and misc. equipment storage and general repair workshop.

4) WASHROOM AND LAVATORY: 1st floor. To be accessible from the apparatus room.

5) OFFCE SPACE: 1st floor. Space to be divided into Chief's office and adjoining Alarm office. Chief's office: Size approx. 10′ x 15′. To be accessible from main entrance hall. To be used as a general office. Alarm office: Size approx. 10′ square. To be adjacent to the apparatus room. Use: Location of an automatic alarm system which will be battery operated. Receiving calls; dispatching trucks; central location of station public public address system.

6) ENTRANCE HALL: Main entrance to building to be separate from apparatus room or offices. The living room, stairs to 2nd floor and basement, offices and apparatus room are to be accessible from entrance hall. Coat closet space adjacent to the entrance hall is necessary. Guest Room (Optional) Accommodations for at least two guests with connecting bath.

7) CHIEF'S APARTMENT: 1st floor. Complete living quarters for the Chief and his family with an outside entrance. Must have inside accessibility to the apparatus room and the offices.

8) LOUNGE OR LIVING ROOM: 1st floor. Adequate for reception and formal entertainment purposes.

9) COOK'S APARTMENT: Basement or 1st floor. Living quarters for one person. Accessible to the kitchen, dining room, basement storage room, and accessible from the service entrance.

10) KITCHEN: Basement or 1st floor. Adequate size for the preparation of meals for 30-40 or more people. A cold storage room with a deep freeze unit is to be a part of or adjoining the kitchen.

11) DINING ROOM: Basement or 1st floor. Adequate space for serving 30-40 or more people.

12) RECREATION ROOM: Possibly adjoining dining room and away from Chief's apartment and study rooms. Adequate space for dancing, pool tables, ping-pong tables, card tables, etc.

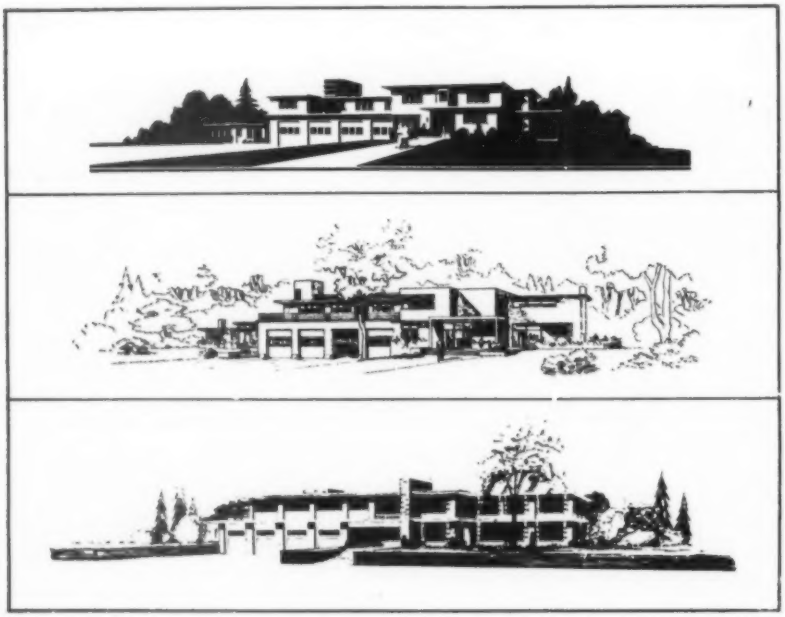
13) STUDENT FIREMEN'S QUARTERS: Sleeping rooms: Preferably two dormitories to be located above the apparatus room with two poles to the apparatus room (poles in the dormitory are those in front of the apparatus room. Poles in the back of the apparatus room will serve the remainder of the 2nd floor, and can be located in hall spaces. Doors around poles are to be equipped with automatic opening devices.) Doors into and connecting the dormitories are to be wide, double, swinging doors. Size: Combined space large enough to accommodate 30 men in standard single beds with ample space for bunking clothes by each bed.

14) INDIVIDUAL ROOMS: A sufficient number of two and three-man rooms for studying and the personal belongings for 30 men. Washroom, Showers and Lavatory: Adequate facilities for 30 men.

15) 2ND FLOOR: Linen closet; Janitor's room; Phone booth; Library; Reading room (optional).

16) LAUNDRY: Adequate facilities for occupants of station.

17) BASEMENT: Storage room: To be used for trunk and possibly staple food storage.



Prize Winning Designs for Fire Station for College Campus

Above are shown elevations of three designs for a volunteer fire department station for the campus of the Washington State College, Pullman, Wash. Top to bottom are designs by William C. Carlson; Thorkle M. Haaland and Roger Stewart.

Fire Prevention Week Contest Winners

The International Committee of Judges appointed to review the reports submitted to T. Alfred Fleming, Director of Conservation of the National Board of Fire Underwriters and Chairman of the Fire Prevention and Clean-Up Campaign Committee of the National Fire Protection Association, by towns and cities of the United States and Canada outlining their activities during Fire Prevention Week, October 6 to 11, 1947, has announced the following winners (in order of their final ratings):

United States

1. Oak Ridge, Tennessee
2. Chicago, Illinois
3. New York City, N. Y.
4. Jersey City, New Jersey
5. Memphis, Tennessee
6. Louisville, Kentucky
7. Fort Collins, Colorado
8. Cincinnati, Ohio
9. Atlanta, Georgia
10. Decatur, Illinois
11. Anderson, Indiana
12. Ft. Wayne, Indiana
13. Portland, Oregon
14. Knoxville, Tennessee

Canada

1. Ottawa, Ontario (tied with Arvida, Que.)
1. Arvida, Quebec (tied with Ottawa, Ont.)
2. Hull, Quebec
3. Brandford, Ontario.
4. Sherbrooke, Quebec
5. St. Joseph d'Alaa, Quebec
6. Kitchener, Ontario
7. Valleyfield, Quebec
8. South Porcupine, Ontario
9. Woodstock, Ontario
10. Galt, Ontario
11. Ft. William, Ontario.
12. Kenogami, Quebec
13. Kentville, Nova Scotia
14. Malartic, Quebec

There were 2,432 reports received for the year of 1947, of which 601 were from Canada and 1,832 from the United States.

The great increase in the number of records from both countries is due to the splendid work of the fire marshals, fire chiefs, leading chambers of commerce both junior and senior, civic groups, and special individuals.

Five thousand, one hundred and eighty-four (5,184) Boy Scouts are reported to have passed the Merit Badge tests in Firemanship during the week

SURVEYS AID IN PREPARATION FOR HANDLING LARGE FIRES

Analyses of Fire Problems Result in Efficient Extinguishing Operations

THE fire department of the Fifth Naval District, Norfolk, Va. (Rodney R. Cox, Fire Marshal), has instituted a highly effective method of preparing for fires which may occur in Navy properties. It consists of making surveys of buildings at the base, preparation of ground plans of the structures, indicating location of fire control equipment and then periodic reviews and discussions of the surveys and plans by the entire firefighting force. In these discussions, methods of operating at fires which may involve these properties are set forth.

Official U. S. Navy Photograph

Preplanned Firefighting Drill at Naval Supply Depot, Norfolk, Va.

A firefighting survey is an attempt to gain beforehand as much knowledge as is possible about a particular fire potentiality, so that when and if fire does strike, the Fire Chief may lead his forces intelligently. Every possible factor that might have a bearing on the fire is considered. It is not to be confused with fire prevention. In fire prevention we take the offensive—we attack the enemy on his own grounds, and attempt to prevent him from attacking. In firefighting survey we assume the worst, that is, despite our best efforts the enemy has been enabled to make an attack and we must now deal with that attack.

At part of a firefighting survey, a plan is prepared to deal with a possible fire under normal circumstances. It is neither possible nor practicable to prepare detailed plans to cover every conceivable circumstance since the number of plans would be limitless. The purpose of the survey is to bring, to the attention of all, the known information about the building, prepare a plan for what might normally be expected and beyond that to apply to a possible fire the overall knowledge of the building gained by the survey, and the firefighting tactics that have been taught and drilled on previously.

The value of firefighting surveys should be obvious. There are many things that can happen at a fire which can hardly be anticipated. But if the Fire Chief has anticipated every possible contingency that occurs to him, he has the necessary information for dealing with each contingency. When something unexpected happens, he is free to devote his full attention to it

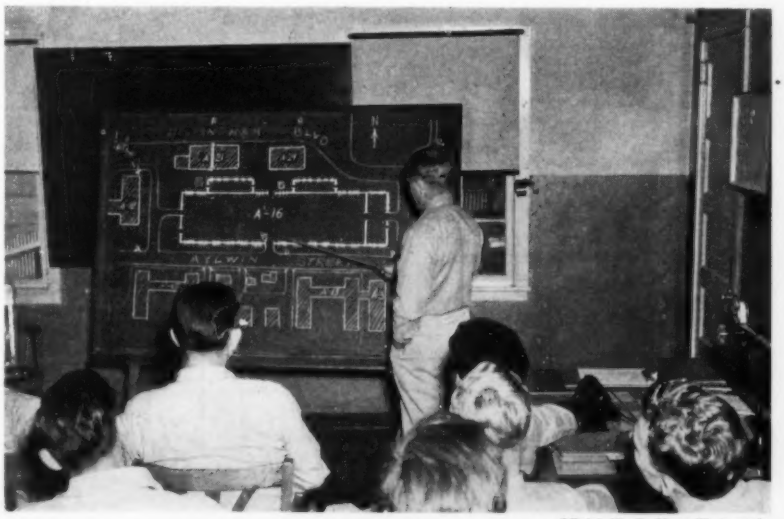
The Fire Department of a Naval activity has two advantages over a municipal fire department in making of surveys. The first is, that the number of buildings involved is generally fewer than in a city, and the second, the fire department has practically unlimited access to the building plans and can call upon local public works department for technical assistance in preparing its surveys.

In preparing a survey, the first step is to obtain a general overall description of the building, and its contents. Next, the available water supply, exposure hazards, ventilation possibilities and salvage possibilities should be considered. The more probable ways in which a fire might start should be examined. In this connection, a firefighting survey may produce worthwhile fire prevention recommendations, though that is not the primary purpose.

A detailed plot-plan of the building and surrounding area, showing important factors, should be prepared. When a survey is prepared in the rough, it should be discussed at a class, in which all the firefighters must participate. At this point, certain changes will probably be made as different men bring their minds to bear on the problem. Then, companies should go to the building and run through an overall inspection, plus drill, on the action plan. At this point, probably further changes will be made in the survey. After the survey is reduced to final form, it should be reproduced and copies of the text and sketch should be made available to all personnel. From time to time refresher classes should be conducted on the surveys.

Changed Occupancies

At the close of World War II, the Naval Aviation Supply Depot found it necessary to release all outside leased warehouse space to reduce expenses and to return this valuable space to civilian activities. Storage space at the Naval Station, Norfolk, is at an absolute premium. The material to be stored could not be kept outside because in a very short time, weather would cause a serious loss. The only alternative was to take a calculated risk and store it in the available covered storage space represented by this Ex-Drill Hall. Fire



Official U. S. Navy Photograph

Fire Station Discussion of Firefighting Survey Takes Place Before Building Is Visited

Official U. S. Navy Photograph

Inflammable Contents and Construction of Typical Navy Structure Protected by Norfolk Naval District Fire Department

walls and automatic sprinklers have been requested and await provision of funds and installation. In the meantime, the Fire Department must deal with the situation as it exists. Below we find Fire Department survey of this building, its hazards and potentialities.

Typical Fire Fighting Survey

The following presents a typical fire-fighting survey carried out by the Fire Department, Naval Station, Norfolk, Va.

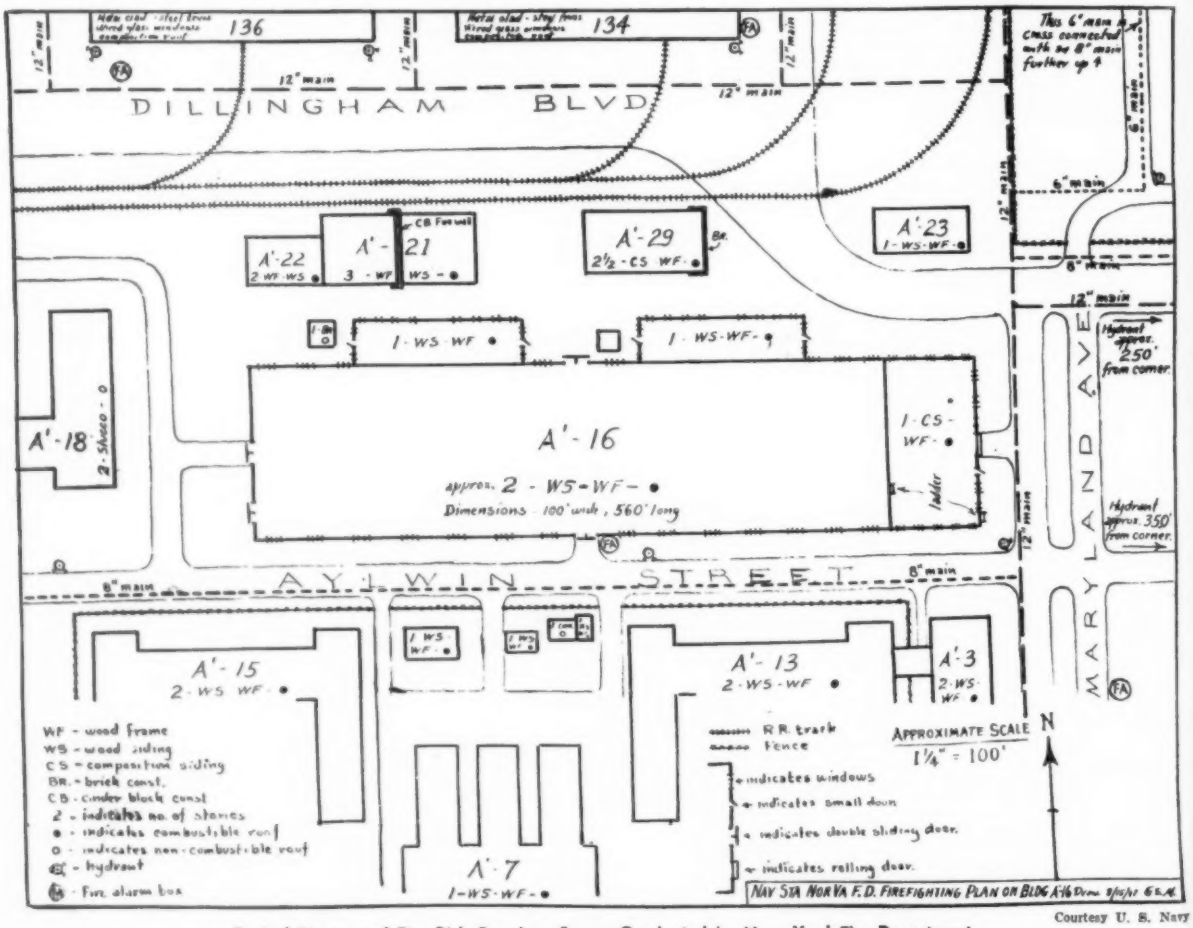
Description: The building under consideration is a two-story, wood, ex-drill hall; no sprinklers, fire walls nor fire stops; storage of non-inflammable materials in wooden crates. Twenty-four-hour guard service; standpipes and first-aid fire extinguishers; water buckets and pails on roof for use if exposed by another fire.

Box 2412 on Aylwin Street, center south side of building.

Water Supply: Adequate on south side and fair on north side due to distance and railroad tracks; 8-inch main Aylwin Street (2 hydrants) cross-connected to 12-inch mains in Virginia Avenue and Maryland Avenue. The hydrants on the north side of Dillingham Boulevard are fed by a 200,000-gallon gravity tank. The mains are checked along Dillingham Boulevard to avoid feed-back to general base system, thus pumpers using hydrants on north side of Dillingham Boulevard are not taking water which would be available to pumpers south of Dillingham Boulevard until the tank is empty.

Exposures: Severe to and from two square blocks wood frame area to the south; moderate to and from the north.

Action Plan: First due Engine Company (#1) attacks fire, using hydrants on Aylwin Street as practical unless fire prevents. Second due Engine Company (#2) lays two 2½-inch lines into the center door, north side of building, with 100-ft. of working line inside the building. Best hydrant southeast corner of A'-134. The purpose of these two lines is to set up a barrier at the mid-section of building. If they cannot be operated effectively on the fire, they will be charged and left. The Company will report to the Chief and expect orders to stretch handlines from the first-due Engine Company's apparatus.



Courtesy U. S. Navy

Typical Diagram of Fire Risk, Based on Survey Conducted by Navy Yard Fire Department

First Due Truck Company (#1): ventilation—wire glass panels in numerous skylights can be removed by raising clips and sliding out if time permits; otherwise, break (men working on ground level be alert for falling glass). Removing doors of fan vent houses gives clear opening 3 x 4 ft. Removing entire vent house improves ventilation.

Forcible Entry: A guard should be available, with keys. Have him unlock (though not necessarily open) all doors. Doors secured by a bolt and padlock inside—red circles on outside walls indicate nearest windows to cross-aisles.

Second Alarm Engine Companies: Expect orders to set up deluge guns. Under certain wind conditions, one Company will be assigned to patrol for sparks and embers downwind of the fire (standpipes in secured buildings in Units X and A' are cut off).

Second Alarm Truck Company: Expect to assist in ventilation of A'-16 and open up Units A' and X (cut locks and open all gates and force entry to all buildings so patrols may operate freely).

Salvage: Routine.

"Rolling" Fire Escape

Described as a "rolling fire escape" by its inventor, Lt. Colonel Nelson H. Rector, Atlanta, Ga., another device for removing persons from, and aiding firemen to operate on, burning structures has been submitted for patents.

The "escape" consists of a light but strong metal "rolling" ladder, or ladders, so mounted on a building that they can be moved across its face, providing a means of escape for those inside, and an aid to firemen in making rescue, ventilating the building, and fighting the fire within it.

The installation consists of three principal parts: the ladders, hung from a movable monorail carriage; the movable carriage; and a lightweight continuous track installed at the top of the hotel or other structure "and surrounding it on its four sides."

The device is said to be primarily intended for hotels, hospitals, apartment houses and schools whose height does not exceed 12 to 15 floors, particularly buildings not having outside fire escapes or sprinkler systems.

The escape is intended "to provide immediate access to firemen to point of origin or vicinity of fire or to limits of its control." The inventor claims firemen could by means of this escape, climb immediately to the point of origin, and simultaneously, firemen on the ground by means of the pulley at the top of the ladder, could raise either fire hose or chemicals to the desired floor. "Thus," he says, "firemen could begin playing . . . water or chemicals on the fire in a matter of minutes."

The hanging ladders, the inventor claims, would not be seriously interfered with by trolley and other wires which frequently prevent the operation of aerial ladders for considerable periods of time. They will permit ingress into the building well above the reach of aerial ladders. And they can operate equally well on sides of hotel where the street slopes sharply and where it may be difficult to maneuver aerial ladders.

Next, the device is intended to provide for an exit of guests to points of safety. The inventor estimates a ladder for a ten-story building would accommodate at least 25 persons at one time. By this method the guests would quickly be removed to safety. For a hotel with a capacity of approximately 300 persons it is believed that four ladders, with a capacity of 100 persons, should be provided. The Colonel explains further that usually the guests would be removed to the ground, but in some instances they might only have to descend or ascend a few floors to reach safety.

The inventor admits the device would not replace other approved methods for fire prevention and claims it should be used "in addition" to self-closing fire doors, etc.

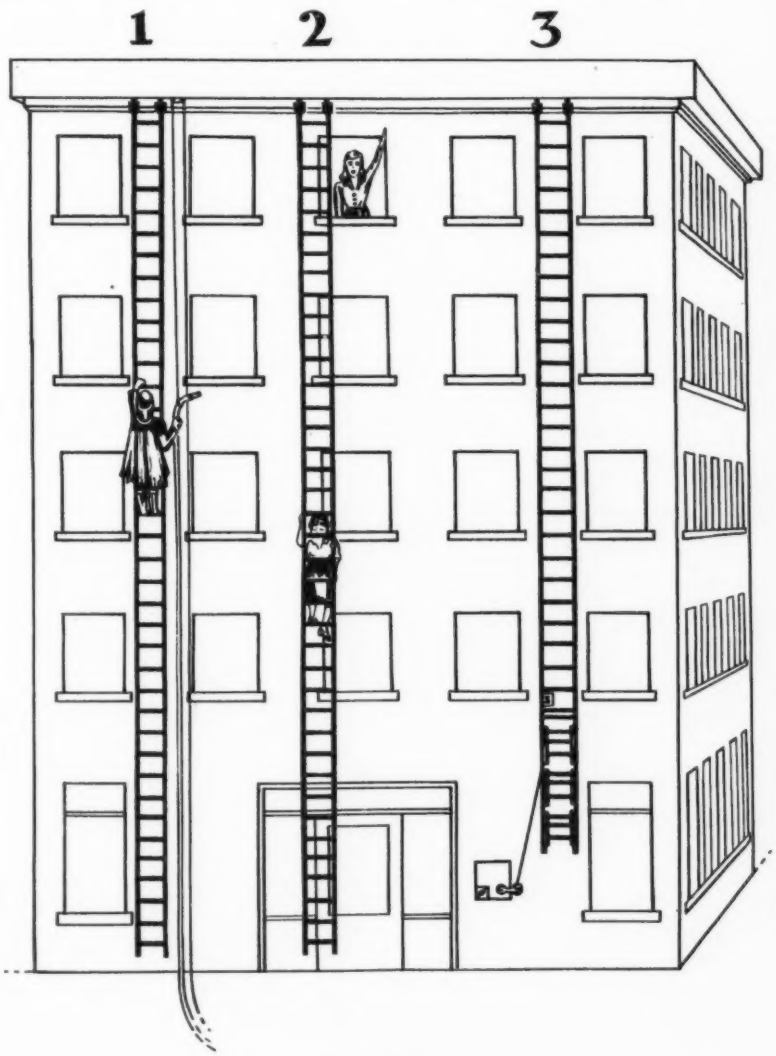
In operation, when not in use, the ladders are to be either placed at each corner of the building or on the rear wall, with lower, sectionalized end folded up and held in place by a cable. The end of this cable might be firmly fixed in a standard fire alarm box and would automatically drop when box is operated. The ladder would be away from the windows and would be well above the ground to foil thieves, or prevent injury to children.

On the first notice of fire the activating of the fire alarm box would turn in the alarm at the nearest fire station and simultaneously release the flexible part of the ladder, which would fall into place and be ready for use. The ladders would then be rolled around the building to the point where they are most needed.

The ladders can be moved from the ground by means of cables attached at their tops on both sides; the cables will be light but strong and somewhat longer than the height of the building and will permit the pulling of the ladders into place. Small motors may be used to move ladders on heavier installations.

When ladders are in the desired location, they are held in place by the "indexing device"—a plunger at the top of the ladder, and set on one side of it, which is forced into holes in the track by a stout spring. When the ladder is to be moved the plunger is drawn out of the hole by means of the cable that extends through eyelets to the end of the ladder at the bottom.

The designer contemplates the use of light but strong metals in the con-



Rolling Fire Escape

struction, but does not attempt to estimate the possible cost of his device beyond hazarding an approximation that to equip a building such as the Winecoff Hotel it might cost about $5,000.

Editor's Note: The reader's attention is called to the fact that a somewhat similar escape device to that described above and termed a "shuttle" fire escape was described on Page 161 in the March, 1947, issue of FIRE ENGINEERING. *It was the idea of Mr. Parker E. Hart of New York City.*

Cambridge Firemen Control Threatening Night Club Fire

One of the most serious fires that Chief John F. Collins has had to fight since he assumed command of the Cambridge, Mass., Fire Department occurred in the Inman Social Club of that city and threatened a number of wooden structures, including a four-story tenement.

The fire originated from unknown causes in the downstairs coat room of the club in the early hours of the morning. As in so many other night club fires, it was probably burning for some time before discovery because the entire building was involved by the time the first apparatus arrived.

The Inman Club is bordered by a two-story brick building on one side and a four-story wooden tenement on the other, with an eight-foot alley separating the club from both exposures. In the rear of the club are more tenements and some automobile garages, all of these structures being of wood construction. At the time of the fire, there was a light breeze blowing toward the tenement, which was saved by prompt and effective work of the companies responding on three alarms, sounded in quick succession. The tenement emerged from the fire without a broken window or blistered piece of wood.

Interior of Building After Fire

The fire demonstrated the value of the area's mutual aid plan when out-of-town forces responded both to the fire, and to cover unprotected districts in Cambridge.

The alarms and responses were as follows:

1st alarm from Box 284—3:45 A.M. Engines 2, 6, 7; ladder 3; rescue 1; high-pressure fog 1; deputy chief 1.
2nd alarm—3:56 A.M. Engines 1, 5, 8; ladder 1; deputy chief 2.
3rd alarm—4:08 A.M. Engines 4, 9; ladder 2; Somerville to fire on mutual aid plan; Arlington and Belmont covering.
All-out—12:02 P.M.

Inman Social Club Building Fire at Cambridge, Mass., at Height of Fire

The fire practically destroyed the Inman Club, with heavy loss, but no other property was damaged.

The Cambridge Fire Department has an enviable record for efficiency. Under Chief Collins the personnel receives advanced training in all forms of fire protection and fire prevention and morale is high. WILLIAM J. REINHARDT.

Burning Bus a Near-Pyre for Twenty Children

A collision between a bus carrying twenty Sunday school children and a motor car in Minneapolis, on December 6 last, touched off a fire, and a chain of events resulting in two badly burned and six others less seriously injured. In addition, three other persons were hospitalized.

The bus, crowded with youngsters, sleds and folding chairs, was proceeding south on Twenty-first avenue S. when it was struck on the right side, at the intersection of Seventh street, by a west bound automobile. The impact was not great, but it was sufficient to puncture the fuel tank of the bus, which continued for about 150 feet along the avenue, leaving a trail of gasoline.

The fumes of this spillage ignited, it is said, from the motor car, and fire traveled in a flash to engulf the side of the bus, effectively blocking the front exit.

The bus driver jumped through the front door and aided five of the young children to safety through the flames. He then tried to open the emergency door of the bus but was unsuccessful. Later, it was found that the emergency door was blocked by folding chairs and sleds. With the aid of bystanders, the driver began breaking windows in the vehicle, while the flames spread to the interior.

Inside the bus, Wanda W. Schickling, 23, Sunday school teacher, in charge of the party, aided by the oldest of the children, 14-year-old Jacqueline Jacobson, started to push the frightened, crying children through the broken windows. Miss Schickling remained inside the bus until all her charges were out then fought her way through the flames and collapsed just outside the front door. Meanwhile, on the outside, the children, some with their clothing afire, were running, terrified down the street.

Neighbors and passers-by caught the youngsters and rolled them in the snow to extinguish the flames. Firemen, who had been summoned, quickly extinguished the fire and broke into the vehicle to make certain no victims remained inside.

Second Accident

A second accident resulted from the first, when an ambulance, responding to the scene of the Sunday school bus crash and fire, collided with a truck at Eleventh avenue S. in a freak accident, injuring three persons.

The speeding ambulance hit the truck broadside, sending it into a spin in which it hit a parked car and continued over the curb, striking a boy who was on the corner with his mother. The driver of the truck was given a summons for failing to yield the right of way to an emergency vehicle, and treated for cuts and internal injuries. Injuries to the boy and driver of the parked car were not serious.

MANY KILLED IN NEW ZEALAND DEPARTMENT STORE FIRE

Basement Blaze Spreads Through Structure Trapping Many Customers and Employees

FORTY-NINE people were reported dead or missing in the burning of Ballantyne's, Christchurch, N. Z., department store, November 18, 1947. The property loss was reported as $1,600,000.

Ineffectual Fire Fighting Operations During Christchurch, N. Z., Blaze

Hand lines from street level have no apparent effect on roaring fire that destroyed city's largest department store with 49 persons killed or missing, and $1,600,000 property loss.

The four-story structure located at the corner of Colombo and Cashel Streets, of old style construction, with a marquee or awning projecting over the sidewalk on both thoroughfares, was filled with the usual holiday merchandise when the fire, of undetermined origin, was discovered.

The fire started at 3:46 P. M., at the height of the shopping rush, and the store—the biggest in Christchurch and the third largest in New Zealand—was well filled.

By 4:15 P. M., walls were collapsing, and the roof had fallen in. When the fire was finally brought under control, only the stone shell of the building was left, and steel fire-resistant doors were melted by the heat and some of the stone walls had been disintegrated to lime.

The blaze began in the basement of the furniture section of the store and spread with appalling speed throughout the building, which covers an acre block. Within twenty minutes, the establishment was ablaze from basement to roof, with frenzied employees and customers struggling to escape.

The interior of the building was entirely of wood, with some brick partitions; there were three stairways, all of wood.

Although reports say that the four-story establishment had sufficient exits to have guaranteed the escape of most persons, there was no internal fire alarm system, no public address system, and no sprinklers. That the fire had gained great headway before the local fire brigade reached the scene is indicated by the fact that the interior was so heavily involved that interior fire fighting was practically impossible. Firemen concentrated on attempting to save those trapped within the structure.

People in the neighborhood buildings report there was a panic inside the store, with screaming women dashing frantically about in the inferno. The presence of the canopy around the sides of the structure proved a severe handicap to the firemen in their effort to ladder the building. It is reported that because of this structural drawback, life nets could not be used. Three girls, however, did jump from windows.

Most of the casualties were in the office block above the carpet department and in the millinery department over the office. Five bodies were found in the cellar where the fire began. These were presumably staff members who were working there. Office block casualties among the Ballantyne's staff included seventeen from the credit department, where two missing auditors were also working. Among the missing customers was a countryman with his wife and child. All bodies recovered were burned beyond recognition.

Firemen brought the blaze under control in two hours but the ruins continued to burn for some time, hampering efforts to locate the bodies of missing persons.

Some fire companies responded to the fire from as far away as 40 miles. At the height of the fire, a total of 300 men from the Christchurch and neighboring fire departments were at work.

New Zealand Department Store Destroyed With 49 Dead and Missing

Fire fighting and life saving operations were handicapped by the combustible structure and contents and sidewalk canopy around building.

New Watchman Booklet

To aid plant management in training watchmen in the proper procedure when fire is discovered, the Associated Factory Mutual Fire Insurance Companies have issued a new 12-page booklet entitled, "Watchmen, What Would You do?"

Written in popular style and illustrated by instructive cartoons, the booklet adopts the question-and-answer method to drive home eight fundamentals, including the operation of extinguishers, calling the fire department, checking sprinkler valves and starting fire pumps.

PRODUCING RAIN FROM CLOUDS BY DISCHARGE OF FINE SPRAY

Water Fog May Prove Effective Agent for Developing Rain from Cumulus Clouds

A NEW method for producing rain, by which ordinary water dispensed in small quantities into actively-growing cumulus clouds initiates a "chain reaction" rainfall from such clouds, was disclosed by Dr. Irving Langmuir, associate director of the General Electric Company's Research Laboratory, recently, in a paper presented at the autumn meeting of the National Academy of Sciences.

Unlike the dry-ice or silver iodide methods of producing precipitation which are effective only in supercooled clouds above the freezing level in the sky, the new method applies to producing rain from cumulus clouds of any temperature above or below the freezing level.

Also in contrast to previously-discovered methods, the new technique is simpler in that it produces rain directly. The dry-ice and silver iodide methods first produce snow, which may turn to rain as it falls.

Certain characteristics the cumulus clouds must have, in order for the new method to be effective, include a vertical, upward wind current of at least five miles per hour, fully-grown cloud water droplets, a high cloud water content, and a cloud thickness of several thousand feet, according to Dr. Langmuir.

Such cumulus clouds are found frequently in the summer in the northeastern part of the United States and all year round over the south, the Pacific coast, and the tropics.

According to the theory behind the method, a small quantity of water dispensed into a cumulus cloud would begin falling in the form of ordinary water drops. The drops would be large enough to fall despite the upward wind currents. As these drops fell, they would collect the many-times-smaller cloud water droplets in their path. By accretion, the drops thus would grow continuously as they fell.

When the water drops reached a critical size of about three-sixteenths of an inch in diameter, they would begin shedding or throwing off water particles collected from that time on. These particles, too little in weight to resist the upward wind currents in the cloud, would be driven back upward, but, as they progressed, they would be continuously collecting the smaller cloud water droplets in their path. Eventually, they would attain a size and weight sufficient enough to begin falling again.

If the cloud has all the necessary characteristics, the falling drops would begin shedding water particles at a higher level each successive time they fell, and thus, a chain reaction activity would progress throughout the cloud, Dr. Langmuir explained.

Such a chain reaction would be roughly similar to that which occurs in atomic energy, where one unit splits into two units, two into four, four into 16, etc., he said.

A principal difference, however, would be that the main body of the falling water drop would continue falling. Rather than completely splitting into two or more parts, it would shed water particles from the time it reached its full growth of about three-sixteenths of an inch.

Thus, under the new method, the chain reaction would be completed, when all the cloud water had been collected into drops large enough to fall out of the cloud as rain.

"Theoretically, a single drop of water, if dispensed in the right spot, would be sufficient to cause the chain reaction rainfall," Dr. Langmuir said.

Rainfall precipitated from a cloud would lower the cloud's density, and thus, the upward wind currents could cause the cloud to grow to much greater heights, Dr. Langmuir said. As it grew, the cloud probably would draw in additional moisture from the atmosphere, and thus, it might be possible to produce a self-propagating or continuing rainstorm, he stated.

Dr. Langmuir said he worked out the theory behind the method only recently, after strange, inexplicable phenomena had been reported to him by various persons engaged in conducting rain-making experiments with dry-ice.

He said that an experiment conducted over the Pacific Ocean by Maurice H. Halstead, of Honolulu, resulted in a 1.25 inch rainfall over a 35 mile area from cumulus clouds that were below the freezing level and thus were not supercooled.

"It was evident that an unexplained different process was taking place, since dry-ice is effective only in supercooled clouds above the freezing level," Dr. Langmuir said.

"The rainfall caused in this instance was not due to the dry-ice but probably due to particles of ordinary ice collected on the dry-ice pellets. These ice particles melted into water drops, and evidently set off a chain reaction in the cloud," he said.

Similar results have occurred in other tests, he reported.

The new method of producing rain applies principally to cumulus clouds, because they are the only type which have the necessary characteristics. Other types usually are too stable, or still, and do not have enough thickness.

In one year's time, methods have been found to produce precipitation from every type of liquid cloud, Dr. Langmuir said. "How much rain is precipitated depends upon the size and water content of the particular cloud, but modification of some kind can be accomplished by one method or another in any type," he said.

SACRAMENTO FORCES CONFINE MENACING WAREHOUSE FIRE

Box Reconditioning Plant Blaze Threatens Exposures Valued at Half Million

A Staff Report*

ALMOST the entire Sacramento, Calif., Fire Department, under Fire Chief Terence Mulligan struggled desperately for two hours to confine a roaring fire that destroyed the lug box reconditioning plant and storage warehouse of the California Packing Corporation, located on the south half of the block bounded by Broadway, Second, Third and X Streets, and threatened to involve adjacent exposures equally combustible, valued at approximately $500,000.

The fire started from an undetermined cause in the mani building, which measured 300 feet on Broadway between Second and Third Streets, and extended back 150 feet from Broadway to an alley, and was discovered by a night watchman, who told firemen he smelled smoke soon after arriving for work at midnight. Upon investigating, he found the west end of the warehouse on fire, whereupon he rushed to the door and notified a passerby to turn in an alarm from a nearby box. [2554, Broadway and Third.]

First-due firemen found the entire rear of the building involved upon their arrival, with every prospect of the flames communicating to box factories and other heavy industrial buildings in the area. The heat was so intense firemen had difficulty for a time getting close enough to effectively operate streams on the fire. According to Chief Mulligan, Engines 2 and 5, which connected to hydrants nearest the blazing structure had to be protected from the radiated heat by tarpaulins. It was also necessary to wet down hose lines several times. Fire fighters themselves on several occasions had to be "cooled down" with small lines or spray.

The fire fed on the highly combustible lug boxes, said to number 250,000, in the warehouse, together with three carloads of loose shook used in manufacturing boxes, and on the framework of the structure itself, which was leveled. A series of back drafts early in the fire carried the flames through the entire building, making inside operations impossible. Immediate efforts of the firemen were directed at preventing the extension of the blaze to buildings Two and Three (see diagram) located just north of the burning structure, occu-

*Based upon information supplied by Fire Chief Terence Mulligan of the Sacramento Fire Department.

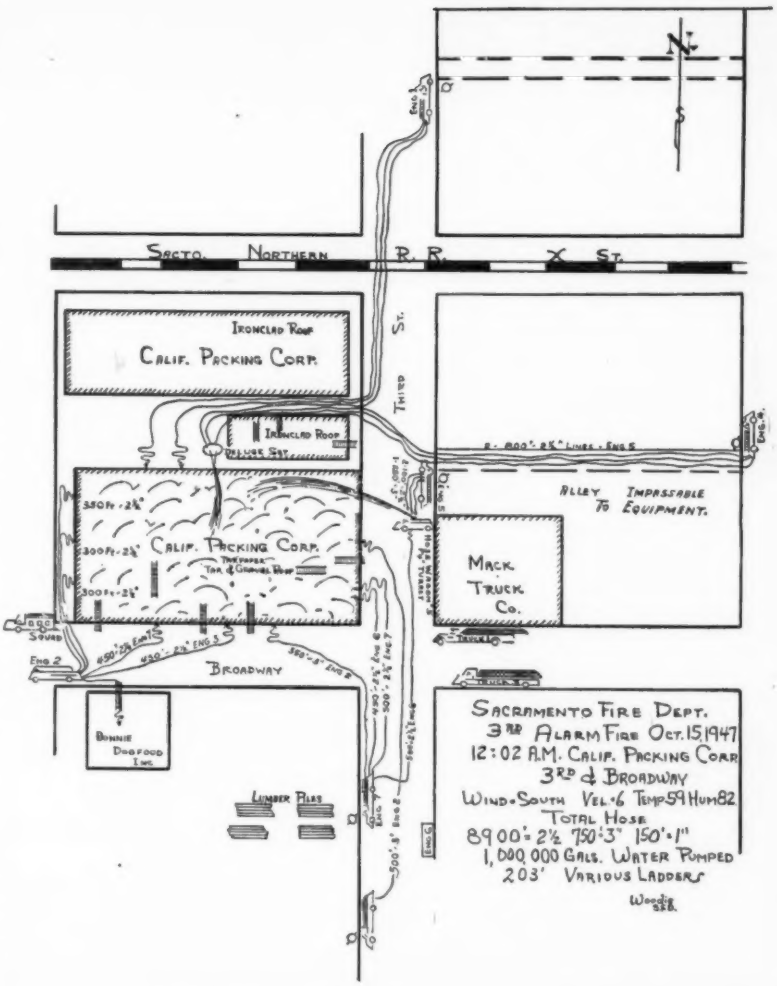
pied by the California Packing Company. Directly across Third Street, the plant of the Mack Truck Company was also threatened as was the smaller structure of the Kraft Cheese & Bonnie Dog Food Mfg. Co. across Broadway. South of this building were fourteen acres of piled lumber of the Setzer Box & Milling Company. None of these exposures suffered damage.

The first alarm was received at 12:02 A.M. and was followed almost immediately by additional calls that brought Engines, 2, 5, 1, 4, 6, 7 and 3 and Ladders 1 and 3, the Squad car and Hose 5. Turret pipes and deluge sets were operated on the burning structure from the rear and Third Street sides. The fire was under control in two hours. At its height the flames were said to be visible from a distance of twenty-five miles.

Firemen who are usually annoyed by the crowds of curiosity seekers were aided in one way during this fire when hordes of large rats raced from the burning warehouse across the fire hose into the grass of nearby vacant areas and set the spectators scurrying.

Three firemen were injured in the course of the blaze. They were Edgar L. Moore, Ralph Sotelo and John Loris. All were given emergency treatment and sent home.

All told, 20 hose lines were in use at the fire, including 8,900 ft. of 2½-in., 750 ft. of 3½-in. and 150 ft. of 1½-in. hose. Water pumped totalled 1,000,000 gallons, while 203 feet of various ladders were raised. The temperature at the time of the fire was 59 deg.; humidity 82%; wind, light, was from the south. The loss to building and contents is estimated at $200,000.



Below: Left: Hot Fire Calls for Plenty of Heavy Streams. Deluge and Turret Pipes Were Used by Sacramento Fire Department at General Alarm Box Plant Fire. Right: Turnouts Take a Beating at Sacramento Blaze. Fireman E. A. Slater Is Forced to Turn Hose on Himself to Prevent Ignition of His Own Fire Clothing. Three Firemen Were Hurt.

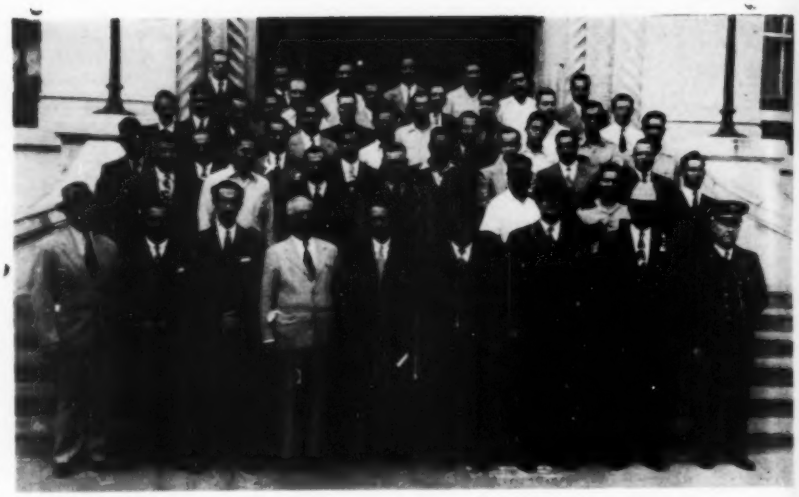
Inglewood Practices Fire Prevention

Inglewood, Calif., "Harbor of the Air" as it proclaims itself, wound up a most extensive Fire Prevention program in 1947 with members of the Fire Department (Bacil A. Roberts, Fire Chief) starting three fires at the local chamber of commerce, and quickly extinguishing them. These taught the hazards of overloaded electric wiring, flammable solvents, and spontaneous ignition.

An impressive point of the program was a dramatic window display, developed by the member of the fire department, depicting "the old firebug" which threatens the existence of a typical city. The miniature city was not built to scale but was complete in nearly every other detail. On either side of the city there were thirteen cards telling the different ways *not* to burn your home or factory. The fire monster straddling the community was described in an enlarged letter in the background, reading as follows:

"This is a tragic and heart-rending story. A city of 350,000 homes—a city of a million souls—is in the midst of being ravaged by fire. A death toll in excess of 11,000—seriously injured will number over 29,000, nor are all of the stores, schools, churches or factories escaping the fury of the flames. An entire city is being attacked by fire with a loss estimated at 700 million dollars. Think of it—a city not at war, but located in a country at peace. That country is the United States. The city is mythical, yet horribly real. It has no name, but if all of the 350,000 homes being destroyed or seriously damaged—and if all of the people being killed or injured by fire in this year 1947 were lumped together in one compact geographical area, we would have a clear and overwhelming picture of the terrible price fire is exacting in this country."

The fire prevention program conducted by Inglewood provided a convincing demonstration of just what can be done by local fire departments to promote this most worthy enterprise.



Graduating Class of the San Antonio Fire Department and Officials.

San Antonio Fire Academy Graduates First Class

The San Antonio Fire Academy of the San Antonio, Texas, Fire Department held its first official public graduation exercise on October 17, 1947. Forty-three apprentice firemen, including Chief Andres Escamilla of Monterrey, N. L. Mexico, who came to the school as a volunteer fireman, were graduated with honors.

The San Antonio Fire Academy, which operates the Fire Academy Training School, started April 1, 1947. Chief Escamilla with the forty-two other students entered at that time and completed the six months course—a total of 600 hours training, during which they covered twelve basic subjects including hose pump and ladder evolutions, ventilation, rescue work, salvage, fire service hydraulics, physics and chemistry of fire, first aid and "miscellaneous units."

The School has been available to fire candidates in the trade territory of San Antonio who desire fire training to receive it upon proper application of the Commissioner of Fire and Police. The School is open to veterans under the G. I. Bill of Rights and the majority of trainees are veterans.

According to A. L. Rathke, Chief, Training Division, S. A. Fire Academy, the Academy has a twelve-month continuous training program and will offer courses for any and all ranks of the fire service. The graduate from this School is offered twenty-four Junior College Credits, should he desire to continue his training at the San Antonio Junior College, thereby placing the School on the college level.

C. E. Troutz, principal, Part-time and Evening School, San Antonio, who presided at the graduation exercises, spoke on the inception and history of the School and how it worked in cooperation with the San Antonio Fire Department, Chief C. A. Hart, and the State Board of Education under the direction of W. R. Cate of Austin, Texas.

The special guests who were introduced, included: The Hon. Ruben Riestra, Counsul of Mexico-Acting Consul General; Hon. Walter Tynan, State Senator of Texas; Daniel Martinez Muguerza, General Manager, Cerveceria Cauahtemoc; S. A. Monterrey, Nuevo Leon, Mexico (a large brewing industry); Ernesto Lopez Fonseca, Director, Technica Industrial; S. A. Monterrey, N. L. Mexico; Ismael Landois Guerra, Secretary to Mr. Muguerza; Arthur G. Randol, Chairman, Fire Prevention Committee, Chamber of Commerce; Henry W. Stanley, Secretary Fire Prevention Committee, Chamber of Commerce.

Among the officials present were: The Hon. Raymond South, Commissioner of Fire and Police; C. E. Troutz, Principal Part-Time and Evening Schools; Fire Chief C. A. Hart, San

(*Continued on page* 59)

Fire Prevention Display of the Inglewood, Cal., Fire Department.

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

"Bottle" Firemen!

Add this'un to the "X-curricular" work of the busy fire fighter—

In St. Louis, Mo., the Fire Department, in the person of Capt. Michael Flayer of Engine 20, took on a new duty—that of baby feeding.

Mrs. Anna McGuire, grandmother of 2-months-old Richard McGuire, had the job of feeding the baby while his parents were at work.

When grandma McGuire returned to feed the tot after giving the child its airing, she found that her door key wouldn't work. Meanwhile Richard let it be known that he wanted his bottle—but quick!

Mrs. McGuire—bless her soul—thought first of the Fire Department. To think was to act. And so at her call, headquarters dispatched Capt. Flayer and his detail, after which it was no bother at all, to make a second-story entry via a department ladder, admit worried Mrs. McGuire and hungry Richard. Engine 20's smoke-eaters may be in for a bit of ribbing, but grandma and young Richard are for them.

* * *

New Theory of Sense of Smell

Now comes science with a new concept of the sense of smell. What effect it will have on the business of fire fighting remains to be seen—or smelled.

According to Drs. Lloyd H. Beck and Walter R. Miles of Yale University, in a statement to the National Academy of Sciences, our noses are sending out heat waves and we can smell only those things that are "tuned" to the proper broadcast band. In short, they challenge the theory that odors are detected through chemical stimulation. And they base their concept on experiments with cockroaches and bees, which support these ideas:

1. Organs of smell transmit infra-red (heat) waves of definite wave lengths and there are certain substances capable of "absorbing" waves within that range of wave lengths—provided the radiation comes their way.

2. As a given substance picks up the heat, the olfactory sending station cools down—and, at a point where the substance picks up its particular quota of heat radiation, we smell it. Simple as that!

Such a concept, Beck and Miles report, offers an explanation of why such gases as deadly carbon monoxide cannot be smelled by human beings. Suggested reason: such gases and other "non-odorous" substances cannot absorb any of the wave lengths transmitted.

The psychologists said it it might be possible to establish a "smell spectrum" to identify elusive odors by their specific power of absorbing a certain wave length of radiation. And, with such a scientific measuring device for odors they said, it might also be possible to "mix" odors, as colors are mixed, to get a predictable result.

Meanwhile fire fighters would much prefer to have 'em figure out how to convert the nice "ripe", juicy" odor of burning rubber, mixed let's say with that of rotten garbage-dump mattress, into something that more approaches Chanel No. 5!

* * *

Hot Off the Tape

In Pittsburgh, a circus clown, Wm. J. Sloan, known in the entertainment world as "The Mechanical Man," carried his two young daughters to safety Dec. 17 as fire routed three families from a three-story brick dwelling in the East End. . . . In Olean, N. Y., when the motion pix "Forever Amber" opened at the local theatre the transformer in the projection room burned out. (Thanks, E. R.) . . . In Detroit, Fireman Horace Lebouf was carrying Catherine Markowski down a ladder from a burning building when flames shot out of a first-floor window as he was passing it. He lost his balance, dropped Mrs. Markowzki, and landed on top of her. She was bruised. He was unhurt—but red-faced. . . . In Rockville, Conn., State police armed with shotguns stood guard while firemen fought a fire in the basement and first floor of the Peoples Savings Bank. . . . A passenger bus swerving from a minor sideswipe collision Dec. 20 in Exton, Pa., crashed into a hotel and set it on fire. The vehicle slammed through the front door of the Exton Lodge awakening most of the 30 guests and jolting some from their beds. . . . Two employees of a beauty parlor in Brooklyn, N. Y., were burned Dec. 19 when a can of spot remover exploded in the shop. Explosion caused when fumes were generated by water leaking from a hot radiator into the spot remover, police say. . . . In New York City Edward Sweeney, 48, awakened when his bed caught fire Dec. 14, ran to the door in his rooming house, opened it, went through and slammed it behind him—only to discover he was in a clothes closet and couldn't get out. Firemen, fortunately, heard his pounding, released him. He was treated for smoke poisoning at the scene. . . . Boys shooting matches from an air rifle are believed to have started a fire that threatened Ledges state park in Boone, Ia. . . . Near Rushville, N. Y., Harold Rote, 5, perished in a fire that destroyed a barn on his parent's Pine Corners Farm. Boy is believed to have struck matches while on second floor tending his rabbits. . . . In New Castle, Ind., an auto owned by Marshal Ball sounded its own alarm when it caught fire in the family garage. At 2:00 a.m., Marshal was awakened by persistent blowing of his car's horn and discovered the fire. . . . In Niagara, N. Y., Dr. Allen Mahood, 25-year-old dentist, got quite a shock while preparing to X-ray a patient's jaw. A short-circuit in the machine knocked the dentist unconscious and it took 30 minutes for a fire department inhalator crew to revive him. . . . Near Mt. Carmel, Pa., a fire has been burning for ten months in a coal mine and there are said to be no state funds to quench it. Blaze started in an abandoned strip mine last February and has burned deep into the earth. . . . In Binghamton, N. Y., George Ganble, 69, legless patient at Broome County Home died of body burns after the head of a match flew off and ignited his clothing as he was lighting a cigarette. . . . A no-smoking edict, holdover from the days of the late Henry Ford, has been lifted for employees of Ford Motor Company. . . . Fire Chief James G. Manross of the Conneautville, Pa., Volunteer Fire Company is used to picking upon the telephone and receiving a fire report—but normally he has to wait for the 'phone to ring first. T'other day, the Chief picked up his 'phone to make a call and was informed by Mrs. Hilda Uher, town telephone operator, that her switchboard was on fire. . . . Report comes, via anon. contrib' that in Newport, N. H., two fire trucks raced to the home of Fire Chief George E. Lewis, but there was no fire there. The lads were helping their chief celebrate his 86th birthday and used the apparatus to carry the presents. . . . Well, well—we've heard tell there were ordinances to cover cases like this but here's the first report we've seen in many moons that they're ever enforced. In Rockland, Me., Philip A. Willet of Thomaston was charged in municipal court with having run over fire hose on Tillson Ave. during the Glover Lumber fire and was fined $5! . . . It remained for the Meridian Fire Department, Meridian, Miss., to inaugurate "Meridian Fire Prevention *Year*," claimed to be the first annual observance of its kind. The trio of officers who head up the "year" are Fire Chief P. M. Pigford and Assistant Chiefs Green Bishop and Grady Worthen, whose age give'em a total service of more than 120 years in the fire department. . . . Surplus chemical wagon put up for bid at Bridgeport, Conn., and Charles R. Eck, city fireman, was the highest bidder!

(Thanks Tom Magner)

Hotcha in Hoboken as Swooner Sinatra Holds Sway

October 30th was "Frank Sinatra Day" in Hoboken, N. J., home of the pet of the bobby-soxers, who formed largest and loudest part of the army of 50,000 who defied a drizzle to pay homage to their "Frankie." High point of the celebration was the crooner's triumphal ride through town on a fire truck, during which Frank's father, Captain Martin Sinatra, fittingly "crowned" his songster son with his own uniform cap.

For Practical Discussion of Current Fire Department and Fire Management Problems

SCHOOLS AND DRILLS FOR FIRE OFFICERS

THE discussion in this Round Table is a continuation of that which appeared in the December issue of FIRE ENGINEERING on schools and drills for fire officers.

The generous response from our readers makes it necessary to carry the discussion over to this issue and next month's issue as well.

Readers are invited to send in their comments on this subject. Address communications to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

HERE IS THE QUESTION

1. **Do you hold special schools or training sessions for officers apart from schooling and drilling given the rank and file?**
2. **Do your officers receive any reward or credits for taking this training (or attending officers' School)?**
3. **If so, how is this handled? On what basis?**
4. **What suggestions have you for furthering officer training to (a) improve their efficiency (b) keep officers from getting in a rut?**

Discussion of the Topic

R. E. Paré, Director, Montreal, Que.: The Montreal Fire Department provides special instruction to officers and men alike. Actually there are two courses of instruction followed regularly by our members. First, the Basic Course which consists of 30 days intensive training, dealing principally with the fundamentals of the profession. This course is given to all rookies and, in a modified form, to all other members as refresher courses. Secondly, the "Paré Plan for Advanced Instruction" which is a planned course of study for firemen and officers, designed to develop new officer material and to elevate the standard of our present officer class by providing the technical and professional knowledge so necessary in modern fire-fighting of today. This course actually takes over where basic training leaves off and is followed continuously by all members, officers included.

As basic training is common to all Fire Departments, our particular course need not be discussed here except to say that it is considered authoritatively as being the best and most complete of its kind in Canada. The second course, however, is an unique one in that it is not practiced anywhere else and therefore merits more than a brief description.

It is called the Paré Plan" and can best be described as a super correspondence course with 3-way control, direction and supervision; first, by the Station Officers, secondly by the Chief Instructor and thirdly, by the Director of Department and his staff. There are presently 1250 members following this course. Here is how the "Paré Plan" operates. On the first day of each month, study bulletins in printed form, comprising either 200 questions minus the answers and based on fire subjects or, full length texts based on such subjects are issued to all fire stations; the number of bulletins issued never exceeds more than one per Company. The questionnaires are progressive in scope in that they commence with questions of an elementary nature and progress gradually to subjects of a higher level and there is enough study material in them to keep the members continually occupied throughout the month. The answers to questionnaires are published 30 days following the publication of the questions.

Upon receipt of the bulletins or questionnaires, the member, must begin transcribing the contents either by longhand or typewriter into a proper copy book, adding his own version of the answer to each question. He must then leave a clear space of several lines, to be filled in where necessary when the answers are published 30 days later. And therein lies the secret to the success of the plan.

By obliging the members to transcribe their material we help them develop their memory, their spelling, penmanship and phrase construction and in this way they retain better that which they have learned. In other words the Fire Department provides almost a complete education without any cost to the members apart from writing materials. We could very easily provide a separate issue of each bulletin to every member but by doing so the purpose of the plan would be defeated because no-one would transcribe. There is a purpose also in delaying the publication of answers to questionnaires for 30 days which is to enable the students to complete the transcriptions, study the questions, discuss the questions with other members of the Company and then form their own answers which are corrected, if necessary, when the answers are issued from the training school.

In addition to transcribing their own study material, officers are required to form and preside over study groups in their respective stations by setting aside a period daily for the discussion of questions and the common exchange of ideas. Also, all members are free to submit suggestions, ideas and questions for publication in subsequent issues. Some of the subjects covered in our bulletins are as follows: Alarm and Signal systems; Hose and accessories; Chemistry, chemicals, chemistry of fire; Physics; Arson detection; Dust and liquid explosions, explosives; Discipline, conduct; Judgment, reasoning, human psychology; General Fire Fighting; Ladders and accessories; Extinguishers, classification of fires; Fire hazards, prevention of fire; First-aid and Resuscitation equipment; Electricity and its hazards in regard to fire; Hydraulics, pumps; Fire Protection Engineering, sprinkler systems; Building construction; Gases and respiratory apparatus; Forcible entry; Protection and salvage of goods; Rescue; Water supply and distribution System, hydrants; Ventilation at fires; Protection and maintenance of equipment; Public relations.

To make this plan operate successfully a 3-way control, direction and supervision is essential. First of all the station officer assists his men and supervises their work upon the progress of which he is obliged to make a monthly report. All such reports are then published to all stations the purpose of which is to show the general progress of the various stations. Secondly, the Chief Instructor examines such work on his regular rounds and initials all copies found satisfactory; on others he makes marginal suggestions. The third check-over is made by the Director of Department and his Staff. This is accomplished by first of all having the members of a given service group submit their work to headquarters in special envelopes provided. This work is analyzed and checked carefully and marginal notes made where improvement is desired. Finally, all transcribed and complete copies are initialled by the entire Committee, the quality of the work registered and recorded to the owner's name and the copies are then returned.

As a supplement to this plan, monthly conferences are held in the evenings at our Training School, for officers only. Fifteen days before the date set for a conference, a problem concerning the service is presented to all officers for study and at the conference this problem is debated upon by chosen teams of debaters presided over by a group of chiefs who act as judges with one of the number acting as moderator. These conferences are well attended and are highly successful.

As regards credits for taking instruction, such are granted according to the quality of written work accomplished and the amount of effort put into it and have a direct bearing on promotional examination averages over and above those awarded successful candidates by the Civil Service Commission. I might also add that promotional examination questionnaires are based entirely on material furnished the members throughout the year.

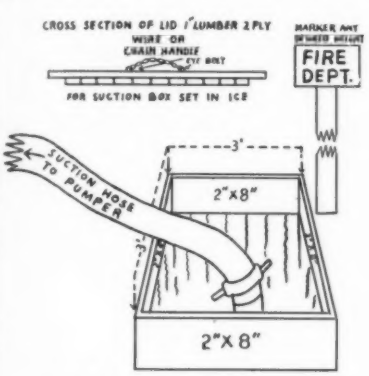
Concerning suggestions for furthering officer training, improving their e

(Continued on page 61)

Short Cuts and Gadgets

DRAFTING THROUGH THE ICE

Now that Old Man Boreas is making it tough for the fire service, we are glad to pass along an idea forwarded by Fire Chief Walter Redman of The Municipal District of Flin Flon, Canada. No foolin'—you'll find Flin Flon on the map of the Province of Manitoba! Incidentally, Flin Flon is a city of nearly 10,000; its principal industry, gold mining, and it has an up and coming fire department. Chief Redman insists that cold weather was really invented in his area. The problem of getting water on a fire, therefore, is a serious one. . . . Here's his letter—



WITH LID IN PLACE COVER WITH LOOSE DRY SNOW

"At this time of the year (early November), as the temperature drops day by day, we begin to think of the problem of drafting water through ice from lake, creek or open reservoir of our town water supply.

Since it takes some time to cut through two feet of ice to get water, we have long since adopted the practice of getting out what we term "Suction Boxes" on the ice as soon as it will bear a couple of men while the work is being done.

A frame of 2 in. x 8 in. lumber, 3 ft. square, is prepared, a hole about that size is cut in the ice, the frame set around the edge by throwing a little water around the base of the frame, thus freezing it down. All ice particles are scooped out of the hole, the lid put on and covered with loose, dry snow. In some areas it may be found better to use bags of hay or straw on the lid before throwing a little moist snow on top to hold them down. A marker is set up to identify location of the "Suction Box."

These Suction Boxes are "serviced" during the winter at intervals, varying according to the severity of the temperature and in *real* cold weather, once a week the boxes are opened up, ice chiselled off the sides of the hole and all fragments scooped out before closing the hole again.

In this way we find a short cut to water through ice if the need arises, although in stormy weather snow has drifted so badly that pumpers could not be taken on the ice to the boxes, could we have found them. Of course we always hope we never need to use the boxes, but a measure of preparedness may save time at a crucial moment. I enclose a sketch that gives some detail of the boxes."

Those of our readers who must depend upon winter drafting somewhat as does Chief Redman in Flin Flon, might like to try out this short-cut.

* * *

FOR DEWATERING HYDRANTS

During World War II we were unable to obtain a pump for use in pumping out fire hydrants and other small inaccessible places filled with water.

At that time, during the civilian defense program, we were supplied with a stirrup pump for extinguishing fires due to incendiary bombs.

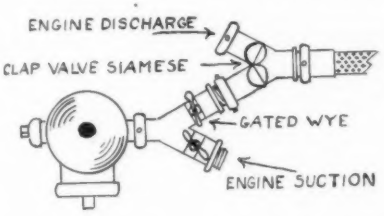
By the use of a reducing coupling and nipple, we attached a hose connection to the bottom of the pump barrel. To this there is attached a ten-foot section of hose which is inserted into the cavity to be dewatered. (Reprinted from WATER WORKS ENGINEERING. Submitted by E. N. Case, Supt. of Water, Rossville, Ill.)

* * *

ANOTHER PUMPER HOOK-UP

Here's still another contribution on the subject of "short-cutting" pumper hook-ups. It comes from Henry T. Hanson, Maynard, Mass., who writes:

"In the 'Short Cuts & Gadgets' column of the July issue of FIRE ENGINEERING there appears a description of a



hook-up that allows a pumper to be cut into a working hydrant line without interruption of the flow of water through the line.

"Of course this is best done by the use of a four-way gate made expressly for this purpose. However, I have seen improvisations similar to the scheme described by the Fremont, Ohio, contributor, and am sending along a sketch of the one which I consider the most practical.

"This hook-up makes use of a double-gated wye and an automatic clapper-valve siamese connected together as shown in the sketch. As the primary purpose of this scheme is to get water through the line in the shortest possible time, the one shown here is pretty hard to beat as there is but one coupling to make. It also provides a shut-off to control the line when working direct from the hydrant. Its disadvantages are the weight of the assembly and the necessity of using a 2½-inch hydrant connection on the engine suction hose—and the fact that the hydrant connection must be of a type having short lugs on the 2½-inch end, as long handles will not clear the other side of the wye."

Perhaps some of our readers may care to comment further on Brother Hanson's "short-cut"?

* * *

The Old Timer Goes Modern—

There's three times a fire should be fought, said the Old Timer: First, before it happens; second, when it occurs; third, after it's over and all the facts are known.

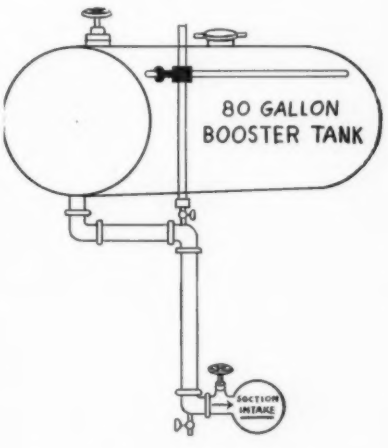
He wasn't trying to be jocular. What he contended was that fire fighters should know the ins and outs of every hazard in their territory. The Sanborn maps will give 'em most of the essential facts, and the Old Timer believes they should be studied, beforehand, and the buildings inspected, if possible. Then, any fire in the occupancies will be more successfully fought. After that, when "all hands" have cooled off and can review the battle dispassionately, he believes there ought to be a "jam session" at which all the good work, and the errors of omission and commission—if any—should be brought out in the open.

* * *

GAUGE TAKES PLACE OF GUESSWORK

Having a booster tank peter out on you just when you were counting on a few more gallons to knock out a fire—or having to mop up the floor because somebody miscalculated in the filling and it overflowed, are two of the nightmares in the life of a fireman.

As Richard L. Chapman, Ex-Chief, Bureau of Fire Prevention, Rutherford, N. J., says: after being assigned to filling this tank (illustrated in the diagram) following fires for many years, I finally got tired of crawling up on the rig and staying there to tell the man on the water faucet when to shut down. I took a 36-in. piece of boiler gauge glass, a piece of ½-in. rubber tubing 3-in. long and some wire and fastened the glass to the petcock with the short piece of rubber tube and also fastened the upper end of the glass to the cross-bar with some pipe strapping.



Now, when we get back from a fire you throw the garden hose into the tank, open the petcock so the water levels off and fill it up! It's a one-man job!

P. S. Don't forget, the glass must be drained in cold weather because a fast run to a fire will freeze the tube in five minutes.

FALSE ALARMS

The officer watched a woman trying to maneuver her car out of a parking place and not doing so well at it. First, she banged into the car ahead, then into the one back of her, and finally pulling out of the space, cracked into a car passing. This was too much for the "law"—he walked over to her and said:
"Let me see your driver's license, lady."
She gave him a friendly smile before replying, "Don't be silly, officer, who'd give me a license?"

Two colored men were discussing the possibilities of safety.
"Sam," said Mose, "if you had your way, which would you rather be in—collision or explosion?"
"A collision, of course," replied Sam promptly.
"How come?" asked Mose.
"Well, in a collision, dere you is; in an explosion, where is you?"

Asking a woman her age is like buying a second-hand car:
The speedometer has been set back, but you can't tell how far.

A certain man was the constant arguer in the community. Whatever anyone said he disagreed with it. But one day . . . one of the loungers at the crossroads store in the course of a meandering conversation, remarked, "I've heard tell that Cy Smith over at Boomtown was one of 19 sons."
The words were no sooner said than the arguer laughed and sneered: "That's whar ye heard wrong, then," he said. "Twa'n't Cy Smith at all. 'Twas a brother o' his'n."

"Which Comes First—the Chicken or the Yegg!"

Safety Sadie: "I understand that Marjory is going west this summer to start a chicken ranch."
Catty Cora: "No, she isn't. . . . I have it on good authority that she is just going to Reno to change roosters."

Woman customer (in bank): "I would like to make a loan."
Bank Official: "You'll have to see the loan arranger."
Woman: "Who?"
Official: "The loan arranger! The loan arranger!"
Woman: "Oh, you mean the one who says, Hi-Ho Silver?"

Henry: "My dear, I really don't believe you can ever teach that dog to obey you."
Mrs. Peck: "Nonsense, darling. Remember how obstinate you were when we first were married?"

Mechanic: "I want my dog's tail cut off right smack up to his hips!"
Veterinary: "Why, that would leave him with no tail at all."
Mechanic: "I know, but you heard what I said. My mother-in-law is coming for a visit and I don't want a particle of hospitality shown."

A married couple were sleeping peacefully when the wife suddenly shouted out in her sleep: "Good Lord! My Husband!"
She was awakened by the crash of glass as her husband waked with a start and jumped out the window.

Girl to Girl

"My worst sin is vanity. I spend hours every day admiring my beauty."
"That's not **vanity**—that's imagination."

"Let's Beat It, Madam! The Crystal Tells Me This Building's on Fire."

Two New Pumpers stand guard at Youngstown

They're AHRENS-FOX

City of Youngstown, Ohio
Department of Fire

C. V. THOMAS, CHIEF
JOHN NAPLES, SECRETARY

BERNARD MARSHALL, BUREAU OF FIRE PREVENTION

November 29, 1947

Ahrens-Fox Fire Engine Corp.
4932 Beech Street
Cincinnati 12, Ohio

Dear Sirs:

Youngstown has recently, as you well know, purchased two (2) Ahrens-Fox Model EC-750 g.p.m. centrifugal type triple combination pumpers, of which we are very proud. I can truthfully say that the town has probably never received so much for their money as they have in the purchase of these trucks. The maneuverability of these trucks is superb. Their pumping ability is quite amazing. They apparently pump with no effort whatsoever. In testing these trucks we found they had ample reserve power and never seemed to work under any strain whatsoever. As one can well see, they are very sturdily built. Knowing that they will be an asset to the City of Youngstown, Ohio, I am

Most sincerely yours,

C. V. Thomas

C. V. Thomas, Chief
of Fire Department

CVT:pas

- *Standing in front of Fire Station No. 7 are the two new Ahrens-Fox Model EC-750 g.p.m. centrifugal type triple combination pumpers recently delivered to the city of Youngstown, Ohio.*

FOR DEPENDABLE FIRE PROTECTION rely on

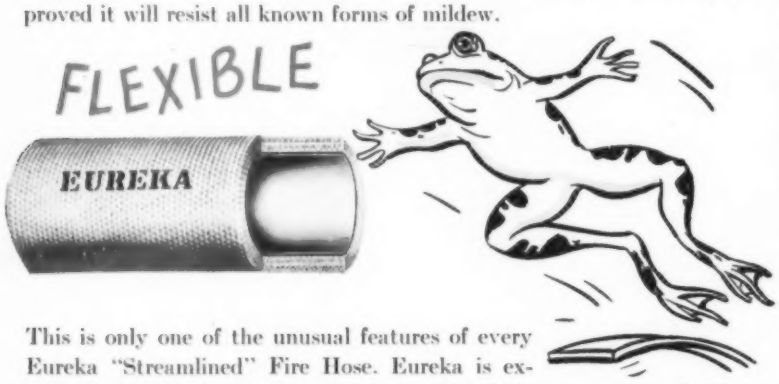
AHRENS-FOX

A PUMP FOR EVERY PURPOSE

THE AHRENS-FOX FIRE ENGINE CORP.

CINCINNATI 12, OHIO

Mildew, the invisible enemy of fire hose, has been conquered by Eureka's unique "Formula X." After years of tests which duplicated and even exaggerated normal fire hose service, "Formula X" has thoroughly proved it will resist all known forms of mildew.



This is only one of the unusual features of every Eureka "Streamlined" Fire Hose. Eureka is extremely flexible, despite its ruggedness. This is because of the Eureka Balanced Weave, which produces a fabric of strong cords correctly woven under *uniform* tension.

Maximum nozzle pressure is always obtainable with Eureka, through its Smooth Interior Filler Ply, which prevents "washboarding."

Every "Streamlined" Eureka Hose undergoes a patented method of Controlled Curing, which eliminates excessive writhing and twisting, permits easier handling on the ground, on ladders, or when loading on the wagon.

EUREKA

"For greater protection to life and property"

EUREKA FIRE HOSE

Division of United States Rubber Company

195 Hudson Street • New York 13, N. Y.

Technical Fire Fighting Service

(*Continued from page 21*)

disaster. Fifteen Chiefs were members of the original Association, the primary purpose of which was to arrange for adequate fire protection of the many industrial plants in the County. In order to provide for the exchange of fire service to make this protection available, resolutions were passed in the many communities giving their Fire Chief authority to extend assistance to his neighbor if called upon. To make this exchange of service practical, it was necessary to establish uniform training in the use of equipment, and provide for the apparatus and equipment to be standard. It was agreed that each department send a representative to the Milwaukee Fire Department's Training School to receive instructions, and this representative was to pass this knowledge on to fellow members in his Department.

The standardization and uniformity were carried out among the fire departments of Milwaukee County to the extent of having the equipment carried on the apparatus in a uniform manner. This was done to make it possible for the members of one Department to locate necessary tools or equipment on any apparatus at the scene of an alarm, whether it be from his own community or not, daytime or at night.

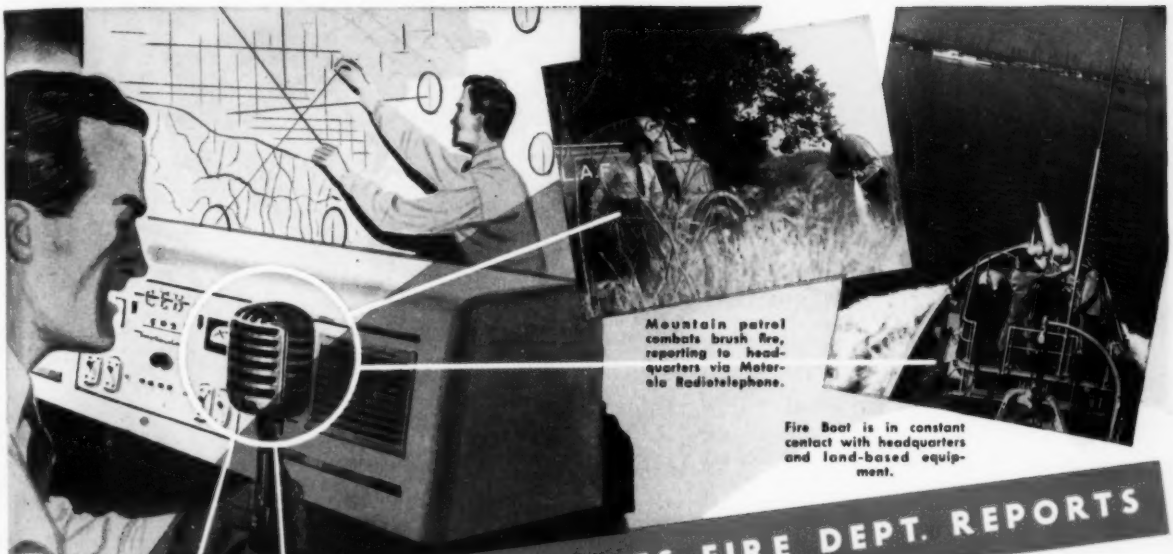
The Fire Chiefs of the Milwaukee metropolitan district, realizing that their departments alone would be inadequate to cope with the tremendous hazards created by twenty-four-hour-a-day production programs, felt that greater fire prevention methods in the plants themselves would be the only solution to this problem. The Milwaukee County Association of Fire Chiefs then entered into a campaign to interest all the industrial plants in the county in the formation of plant fire brigades. At the time the program was launched, there were twelve plant fire brigades in the plants of the County, but with their immediate whole-hearted support to the plan, a total of 263 plant fire brigades were formed.

The facilities of the Milwaukee Fire Department Training School were made available to representatives from each of the plants, where they received instructions in first aid fire fighting, as well as the proper method of sending in an alarm. In all cases they were cautioned to call the regular fire department immediately, and not wait while trying to handle the fire themselves, thereby causing a delayed alarm, the bane of all good firefighters.

Due to the excellent cooperation received from the industrial plants in this area, Milwaukee was one of the few communities that could point to an actual reduction in fire losses in industrial plants during the War period.

The Milwaukee County Association of Fire Chiefs did not dissolve their membership with the cessation of hostilities—in fact, we have added one additional Fire Chief to the organization with the creation of a fire department in another village in the County. It is the belief of members of the Association that there is ample justification for the continuance of the exchange of service program in peacetime as well as during wartime.

We have found this program to work most satisfactorily in cases of border-



Mountain patrol combats brush fire, reporting to headquarters via Motorola Radiotelephone.

Fire Boat is in constant contact with headquarters and land-based equipment.

LOS ANGELES FIRE DEPT. REPORTS

NEW SPEED—CONTROL—COORDINATION

WITH

Motorola FM 2-WAY RADIOTELEPHONE

452 SQUARE MILES OF HIGHLY INFLAMMABLE WHARVES, FISH DOCKS, PETROLEUM REFINERIES, MANUFACTURING PLANTS, RESIDENTIAL AREAS AND BRUSH COUNTRY UNDER CONSTANT CENTRAL CONTROL WITH MOTOROLA RADIOTELEPHONE

Fire lookout station calls for needed equipment via Motorola Radiotelephone.

Fireman checks with station via Motorola Radiotelephone installed on engine.

Now, Los Angeles engine companies receive special instructions while *on the way* to a fire — so that precious time is not wasted in organization at the scene. Ambulances, additional companies or special equipment are ordered the moment the need arises. Wharf fires are combatted with complete coordination between fire boats and engine companies — all through the speed of communication made possible by Motorola Radiotelephone.

Chief Engineer J. H. Alderson, who now has all of his far flung engine companies, towers, patrol boats and administrative vehicles under instant, constant central control, says of radiotelephone, "It is the greatest innovation for fire services since the introduction of motor-driven vehicles."

Find out how Motorola Radiotelephone can speed *your* service, save money and give you complete control of every phase of your operation. Write today — a Motorola Field Engineer will call to discuss your specific application.

NEW FREEDOM FROM INTERFERENCE WITH

P.S. **"PRECISION SELECTIVITY"—A Motorola Exclusive**

"PRECISION SELECTIVITY" is a revolutionary Motorola development that gives you the absolute maximum of protection against interference *of all types*. It is so carefully designed that signals 120 KC off resonance (alternate channel) have a rejection of more than 86 db. You are protected against signals of 20,000 microvolts while you are receiving your own signal — which could be as low as 1 microvolt — and still get perfect reception.

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IN CANADA: Rogers Majestic, Ltd., Toronto—Montreal

Motorola
FM 2-WAY RADIOTELEPHONE

line fires. There is no delay in the process of extinguishment if a fire is found to be beyond the normal limits of the department responding, which immediately goes to work and at the same time the Fire Chief of the community in which the fire is located is notified so that he may take the necessary action for official records.

Monthly meetings of the Milwaukee County Fire Chiefs are held at which discussions take place pertaining to department matters, new ideas, new equipment, with any changes in methods of fire fighting being made county-wide through this Association. In addition, these meetings serve the purpose of a question and answer forum where the problems confronted by the various chiefs may be freely discussed. A great amount of valuable information obtained through practical experience is thereby made available to the members of the Association.

The heads of the Industrial Plant Brigades are also a part of this association through the medium of associate memberships. Information is furnished to them in the same manner, and the facilities of the training schools of the regular fire departments are available for instruction of their personnel.

Under the Civilian Defense program during the War, the same uniformity of instruction of Auxiliary Firemen was carried out by the fire departments of Milwaukee County, affording the community the maximum in protection.

Later, when the Internal Security Division took over the responsibility of correlating the fire fighting and fire prevention services for the protecting of plants engaged in war production for the U. S. Government, the head of the service in our area was extremely surprised to find that Milwaukee County was one place which created no problem. In fact, it was stated that Milwaukee County had a plan in operation which even exceeded their demands and that many of the features could well be applied to the other areas under the jurisdiction of the Internal Security Division.

As an outgrowth of the training received under the Civilian Defense program as Auxiliary Firemen, a number of civic minded men organized a volunteer auxiliary unit known as the Milwaukee Fire Department Emergency Corps. This corps was formed for the primary purpose of a reserve supply of trained personnel to augment the regular force in the event of a major disaster. These men are continually receiving fire department instruction under the supervision and direction of the department's Bureau of Instruction and Training. In the event of a greater alarm of fire, the heads of this unit are notified by the fire department dispatching bureau and the balance of the members of the corps are alerted by them, and report to designated stations to await further orders. The services of the Corps has been greatly appreciated by the regular personnel and provides a very valuable adjunct in the protection of our community.

The Milwaukee County Association of Fire Chiefs believes that the record for non-interruption of war production attributable to fires in the Milwaukee industrial area is primarily due to the broad fire fighting and fire prevention service program sponsored by the Association before our country actually entered the War.

The proposed plan for a United States Technical Fire Fighting Service to institute on a national scale a program similar to that which we have practiced and found extremely valuable in our own County is, therefore, regarded as highly feasible in peacetime and certainly a necessity during wartime. Such Service would also give proper recognition to the fire fighting profession, which it so richly deserves. The proposed plan will further result in assurance to the citizens and production centers of adequate fire protection from experienced personnel during any emergency. The standardization of apparatus, equipment and training would be of inestimable value to the nation's fire service and provide a means for the development of a universal fire service for combatting our most persistent and dangerous enemy—FIRE.

I. A. F. C. to Meet November 9-12

Chief Henry R. Chase, of Miami, Fla., and First Vice-President of the International Association of Fire Chiefs, has tentatively set the date for the 1948 conference of the Association in his city at November 9, 10, 11 and 12. These dates will be subject to confirmation by the Board of Directors when it holds its annual meeting in New York City this month.

MORE THAN JUST A BOOSTER PUMP

It's the Gorman-Rupp Dual Fire Fighter. Use it to fight fires direct -- use it where water supply is inaccessible to the truck pumper. It throws 100 gallons at 70 pounds pressure or 80 gallons at 80 pounds pressure. Primes in 15 to 30 seconds with a positive acting exhaust priming device. No adjustments between priming and pumping -- compact -- easily carried by two men.

Use it as a booster pump. Valuable for dewatering and many other important jobs -- wherever you desire to save wear and costly damage to expensive truck pumpers.

Write for Bulletin FD-3. Get complete information on Gorman-Rupp's Dual Fire Fighter. Learn how little it costs and why it's the easiest pump to maintain.

A few territories open to recognized fire equipment distributors.

THE GORMAN-RUPP COMPANY

BOWMAN STREET · MANSFIELD, OHIO

Questions and Answers

Principle of Distributor Operation

To the Editor:

I would appreciate your description of the principle involved that causes the distributor to rotate when water under pressure is applied. Is this principle the same as for back pressure on charged hose lines?

G. V. B.

Answer: The physical law which explains the rotation of a Bresnan distributor is: "To every reaction there is an equal and contrary reaction." This is the same principle which accounts for the kick-back of nozzles when streams are being discharged therefrom.

In the case of the Bresnan distributor, you will notice that some of the ports are inclined slightly tangentially to give a kick in the reverse direction when water leaves the outlet. The reaction produced by streams being discharged from such ports gives a counter-force which causes the head of the distributor to spin.

A Correction

To the Editor:

Your answer to the question of J. H. W. regarding ladder pipe stream in the November issue, appears to be in error. At least we have been unable to arrive at the same solution, and it may be that we are in error.

However, we believe the correct answer to be as follows:

At 70 pounds nozzle pressure, discharge from a 1¾-inch tip is 761 gallons per minute.

The friction loss in 100 feet of 2½-inch hose carrying 761 gallons per minute is 123.4 pounds.

The friction loss in 50 feet of 2½-inch hose at the same flow is 61.7 pounds.

The pressure at the siamese will then be:

Back pressure
$= 40 \times .434 =$ 17.36 pounds
Nozzle pressure $=$ 70 "
Friction loss $=$ 61.70 "
Pressure at siamese $=$ 149.07 pounds

The stretch from the pumper to the siamese is 500 feet. Assuming that we are using two lines, each will carry $761 \div 2 = 380.5$ gallons per minute or 380 gallons approximately.

The friction loss per 100 feet of 2½-inch hose carrying 380 gallons per minute is 32.68 pounds.

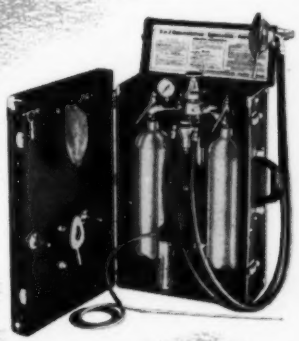
The friction loss in 500 feet will be $5 \times 32.68 = 163.4$ pounds.

The engine pressure will then be

ARE YOU PROVIDING ADEQUATE RESPIRATORY PROTECTION FOR *your* COMMUNITY?

. . . Vienna, W. Va., dept. has E & J equipment for use in drownings, monoxide poisonings, suffocation and other respiratory emergencies . . .

The up-to-the-minute volunteer department of Vienna, W. Va. (below), is one of thousands, all over the nation, that have chosen E & J equipment to provide dependable, versatile respiratory protection for their citizens.



The E & J machine adjusts itself to the lungs of the patient, regardless of size; signals the operator if breathing is obstructed by foreign matter, and withdraws such obstructions. It is extremely simple to operate.

Attachments make it possible to use one machine on three patients at once, or to take the breathing mask into confined accident locations as far as 100 feet from the machine itself.

Every department needs one — or *more* — E & J resuscitators. Get full information or a demonstration, without obligation, by mailing coupon below.

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163.4 + 149.06 = 312.46 pounds instead of the 295.56 as indicated in your solution.

If they intended to use this pipe, would it not be better to use a four-way into 3-inch hose from the siamese to the ladder pipe? In my way of reckoning, they would have an engine pressure of 157.64, which I believe a Class A could produced from a good hydrant. R. J. V. F.

Answer: Your solution is correct; we are in error.

761 ÷ 2 gives 380.5 instead of 355 as indicated in our answer. This changes the balance of the calculations, which you have worked out correctly.

Yes, it would be far better to use a four-way into 3-inch hose from the siamese to the ladder pipe. In this case a Class A engine could handle the layout satisfactorily.

Pump Discharge at Higher Pressures

To the Editor:

1. A rotary pump will discharge 1000 g.p.m. at 125 p.s.i. Why is it that this pump will discharge a smaller volume of water at a pressure higher than 125 p.s.i., although its r.p.m. is higher and it is a positive displacement pump?

2. What is the ratio of expansion of mechanical foam, as used with a hip pack, back pack and medium size foam nozzle? N. R. W.

Answer: The reason why a rotary pump discharges less water at high pressures than it does at low is because of the power limitation of the motor. For example, to discharge 500 gallons per minute at 200 pounds requires just twice the horsepower that is required to discharge 500 gallons per minute at 100 pounds pressure.

While the motor may turn over faster at high pressures, and less water will be discharged, it is because of the gear ratio between the motor and the pump. The gear ratio is changed at higher pump pressures, enabling a motor of given horsepower to handle higher pressures without being overloaded.

You may recall that a rotary pumper has controls for "discharge" and "pressure." Changing from one to the other changes the gear ratio between the motor and the pump.

And now with reference to the expansion ratio of mechanical foam: For each gallon of water used, approximately eight gallons of foam is produced. This ratio is greater where high expansion foam is employed. But the ordinary mechanical foam has the one-to-eight ratio. The usual proportions of the mixture are three gallons of foam compound for every 100 gallons of water used.

The Youngest Fire Chief—

To the Editor—

What is the name of the youngest paid fire chief in the United States, and where is he stationed?"

B.C.

Answer: It isn't often that the editors of this journal are stumped but this is one we cannot answer with any degree of accuracy. So, we put it up to you readers. Who, in your opinion, is this man—and where is he?

The Meaning of "Vamp"—

To the Editor—

Numerous times your column has referred to volunteer firemen as "Vamps." Would you be kind enough to tell me the origin of this term?

P.E.L.

Answer: Like the term "Buff," there are several definitions for "Vamp"—none of them bearing the stamp of official authenticity, however. Perhaps some of our readers might like to offer their interpretation.

World Wide Fire News

By Roi B. Woolley

Britain Has Its Troubles, Too

The "little devils" of delayed alarms, water shortage, traffic jams and pestiferous sightseers that plague American fire services have their counterpart in Britain.

Last fall, we're told by *Fire* "Of-

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⅓ MORE SPACE FOR EXTRA FOOTAGE
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Easy-fold construction
Compare Quaker Modern Municipal Fire Hose with Easy-fold construction and see how flatly it folds, how compactly it packs, allowing up to ⅓ extra footage in trucks. That means 33% greater fighting power for dousing hard-to-reach fires.
Strong, specially-woven, cotton jackets protect the slow-aging rubber tube, assuring sturdy resistance to pressure, abrasion, severe usage.
Check your equipment today. Play safe and order a supply of Quaker Modern Municipal Fire Hose with EASY-FOLD construction. It's reliable protection for cities, towns, industrial plants.
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ficial Journal of the British Fire Service," that "a delayed call, sightseeing motorists, who hampered firefighting operations, and deficient water supply contributed to the destruction by fire . . . of Granby Hotel, a fashionable resort, at Westwood, near Bradford-on-Avon, Wilts."

In addition to the other troubles, "there was considerable pilfering by some of the crowd of more than 500 sightseers of goods saved from the fire."

We learn, too, that "inmates of the hotel unwittingly spread the fire by leaving open windows, from which they had thrown their belongings, and the doors of their rooms." Sounds familiar, doesn't it?

* * *

Red Faced Firemen Meet Red Tape

Officials of the Newark, N. J., Fire Department expected to get a carbon dioxide fitted, aircrash fire fighting truck from the Air Forces on a December night. Instead, they got the good old Army red-tape run-around.

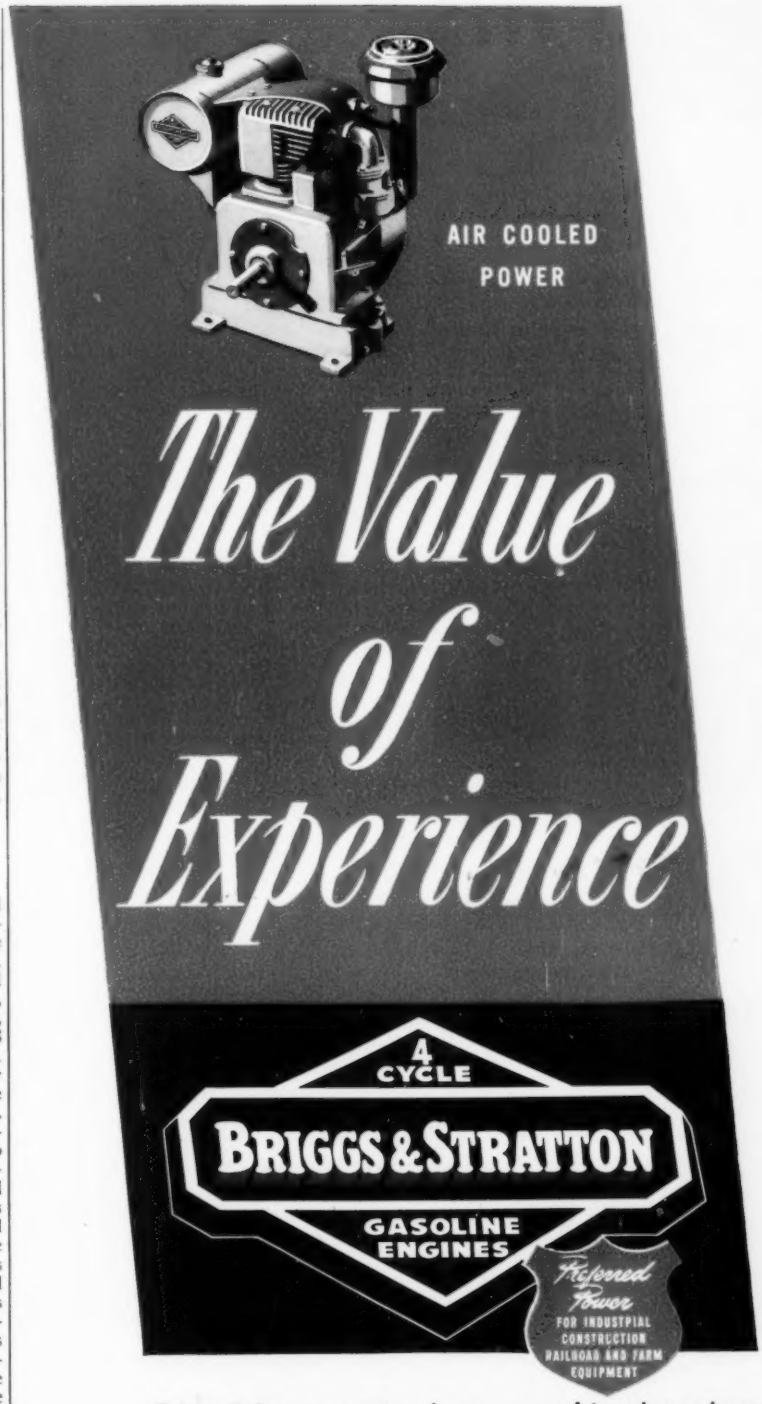
When Deputy Chief John Weeks and other officials called at Air Force Building No. 58 at the edge of the Newark Airport for the truck, which was supposed to be ready and waiting for them, the Army officer in charge refused to surrender the truck, saying he had no orders to do so.

Newark firemen, who had been trained by Air Force personnel for past months in the operation of the particular aircrash unit, weren't told when and how they would get their promised apparatus (protection of Newark Airport is the responsibiiity of the municipality, it is said).

* * *

Hot Off the News Ticker

Fire early in December destroyed seventy buildings in Miyazaki, Southeastern Honshu, Japan, including the city hall and chamber of commerce. About 1,000 persons were reported homeless. . . . In Yokohama, Japan, fire, caused by an overturned kerosene lamp, destroyed twenty-five homes, made 128 Japs homeless late in November. A U.S. Army generator and several nearby buildings were destroyed by fire the previous night also in Yokohama. . . . In Cristobal, Canal Zone, the fire department poured 630 tons of water into No. 1 hold of the Liberty ship Abraham Rosenberg, before a fire, discovered after the ship had left the pier, was controlled Dec. 7. The ship had cleared for Haifa with milk and food for the United Nations international children's relief for distribution in Trieste and Greece. It was believed the cargo was seriously damaged. . . . Municipal ordinances to control smoking on wharves and appointment of port wardens to enforce them were recommended at the last President's Conference on Fire Prevention. Nothing thus far, however, has been done to implement the recommendations. . . . An explosion of undetermined origin, followed by fire, destroyed the Pinehurst Inn, well-known Laurentian Mountain vacation resort in Val Morin (Que.). No one was injured. . . . Fire lit by by an explosion in film stores in the offices of the Gaiety Theatre, Kingston, Jamaica, killed nine persons, injured five others. Many victims were trapped inside a heavy glass door jammed shut by the blast. . . . Eight miners were burned in two gas explo-



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MEMPHIS

Goes CIRCUL-AIR

Memphis—home of the annual Fire Department Instructors' Conference—has adopted Circul-Air as their standard drying equipment.

Chief Connie O'Sullivan says, "They're great dryers. We have had eight (8) in service for several years and would like them in all our other stations."

Scores of other "repeat" buyers are equally enthusiastic about the Circul-Air Hose Dryer. It's ideal for cities, towns and fire districts of any size, or for industrial fire departments.

CIRCUL-AIR THE AIR-CONDITIONING

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- √ *Saves space—fits in any corner*
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- √ *Dries fire clothing, too*

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DETROIT 2 MICHIGAN

sions 600 feet below the surface of the Lance Colliery of the Glen Alden Coal Co. of Larksville, Pa. Fire spread to the mine timbers, giving fire crews a hard battle. . . . Fire which broke out in the coal bunkers of the 9,000-ton steamer Port Melbourne while the ship was en route to Liverpool from Canada, was fought with steam. In Liverpool, firemen and dockers tackled the smouldering blaze, which required unloading all bunker coal. . . . They're using dynamite to dismantle surplus Army barracks in Fort Lewis, Wash. It's claimed to be more effective than piecemeal wrecking. . . . Four elderly Chinese were reported dead and one missing after fire destroyed former Chinese Theatre in Vancouver, B. C. One fireman was injured. Loss $50,000. . . . Helsinki, Finland, reports at least ten persons were killed and between fifty and sixty injured in a night explosion at a wood pulp factory on Gulf of Bothnia. . . .

The Dutch ship Althearat took fire in the South China Sea. . . . In a dramatic rescue by an Alaska Coastal Airlines amphibious plane seven persons escaped from the flaming motorship North Pass seventy miles south of Juneau, Alaska. The 60-foot vessel, set afire by an explosion in its gasoline tank, burned to waterline. The rescue plane, summoned by radio on a Pan-American Airways Clipper, reached ship in thirty minutes from Coast Guard H. Q. in Juneau, landed nearby and removed passengers. . . . The Soviets blew up the bomb shelter where Adolph Hitler hid out during the fall of Berlin. . . . In Seattle, Coast Guardsmen exploded an enemy mine floating in Depoe Bay by detonating it with rifle fire. Blast broke windows in houses atop cliffs on the bay. It was the seventh Jap' mine reported sighted off the Oregon and Washington coasts since Nov. 4. . . .

Claimed to be world's most powerful plant, Northrop's 44-ton, 8-jet, 32,000 h.p. bomber, the YB-49 flying wing, had its tryout. It has a wing-span of 172 ft., weighs 100 tons loaded, and carries crew of thirteen. Its fuel capacity is reported a deep secret. . . . In his effort to prosecute pilots of low-flying airplanes and trick flyers, Mayor Joseph Luna of Lodi, N. J., wants wartime civilian aircraft spotters called back to duty. . . . Fire destroyed the Hotel Hospitset at Oslo, Norway, causing damage said to be $1,000,000. Five persons injured—two missing. . . . Mark M. Wohlfield, a survivor of the Bataan death march, recently discharged from the Army as a major, has donned his pre-war fireman's uniform and reported for duty with Ladder 7, New York Fire Department. . . . The town of East Amherst is still talking about the Army plane which ditched two auxiliary gasoline tanks overhead while trying to land at the Buffalo airport, six miles distant. One of the tanks landed fifty feet from the postmaster's office, spraying gasoline and tearing up part of a railroad track. No fire ensued. Pilot, who had to jettison tanks thought he was over the country. . . . Woodward, Okla., rebuilding after an April tornado which killed 106 and injured about 1,000 persons in it and nearby towns, suffered further damage when fire gutted four store buildings in November. Fire was accompanied by explosions. Several persons were injured. . . .

Ten persons were killed and twenty shops were destroyed in a waterfront fire in Canton, China, early in December.

DC-6's Trouble Traced

According to T. P. Wright, Civil Aeronautics Administrator, overflow gasoline running into the cabin heating system caused fires aboard two DC-6 type airplanes which recently were grounded temporarily.

Wright said an industry-government committee has "determined to its satisfaction" that this was the cause of a series of blazes aboard this type of plane, one of which crashed in flames at Bryce Canyon, Utah, killing fifty-two persons.

More than eighty planes were grounded after an American Airlines ship landed with a serious fire in its belly at Gallup, N. Mex., in November. No one was injured, and firemen controlled the blaze.

According to the committee, "overflow of gasoline while it was being pumped between the main tanks and auxiliary tanks caused the fire at Gallup . . . the same conditions probably caused the fire in the Utah accident."

Persons in the News

Padgett New Chief in Alexandria

Bernard J. Padgett, 41, was appointed head of the Alexandria, Va., Fire Department to fill the vacancy left by Chief James M. Duncan, Jr., who recently resigned. Padgett also succeeds William Barbour, who has served as acting chief since August 1.

The new chief has been connected with the Alexandria Fire Department since 1922. From 1930 to 1942 he was assistant chief operator of No. 4 Engine Company. He was appointed chief air raid warden for the city in 1942 and served for three years. In 1946 he became superintendent of streets and sanitation. Although he has been on a volunteer basis in the fire department since 1942, Mr. Padgett has acted as Captain of No. 4 Engine Company. He has attended numerous firemen's training schools and has conducted training classes for firemen in Alexandria and other Virginia cities.

P. C. Fontaine Chief at Fort Worth

Captain Paul C. Fontaine, a veteran of 27 years in the Fort Worth, Texas, Fire Department, has been named chief to succeed Claude Ligon who is retiring at 67 years of age after nearly 42 years in the department.

Hayes Becomes Councilman

Charles W. Hayes, formerly Assistant Chief of Watertown, N. Y., and now active in the fire protection equipment sales field, was elected City Councilman in November, under the non-partisan plan of city manager government. The office also makes him one of the Fire Commissioners.

Hayes ran for office on a platform which included planks to advance the interests and morale of the fire department by giving citizens better protection, and improving conditions, such as working hours, within the fire department.

Pax Mendelssohn Made Fire Commissioner

Paxton Mendelssohn, long a leading fire buff and a booster of the Detroit, Mich., Fire Department, has been made a Fire Commissioner of that city by the newly-elected Mayor Eugene I. Antwerp. Named, along with Mendelssohn as Commissioners were David Pollack, real estate mortgage and finance man, for term ending March 1, 1949, and T. Curtis McKenzie, president of the Klem Chemical Co., for a term expiring March 1, 1950.

Commissioner Mendelssohn's term will expire on March 1, 1951. He has served for many years as Chairman of the Detroit Board of Commerce Fire Prevention Committee.

The new Commissioners were inducted into office on January 6.

Chief T. O'Brien Heads Fire Alarm Bureau

Effective November 1, 1947 Battalion Chief Thomas P. O'Brien was appointed Acting Deputy Chief of the New York Fire Department, and assigned to command of the Bureau of Fire Alarm Telegraph, directly responsible to the Fire Commissioner Frank Quayle and Chief of Staff and Operations, Frank Murphy. It is said that this is the first time in the history of the New York Fire Department that an officer of the uniformed force has been placed in command of this division of the fire department.

The appointment marks the retirement of Val Fendrick, for years head of the Bureau. It is understood William Hennessy will continue as Assistant Engineer.

McKinney New Indianapolis Chief

Roscoe A. McKinney, first assistant chief of the Indianapolis, Ind., Fire Department since 1937, was appointed chief, to fill the post left vacant by the retirement of Chief Harry H. Fulmer.

Chief McKinney joined the department in 1915 and in 1920 won his lieutenancy. He was made captain in 1931 and a year later advanced to battalion chief. In 1930 he was named acting first assistant chief and in 1937 the rank was made permanent.

The new head of the department is an outstanding fire fighter and has narrowly escaped death on a number of occasions while leading his men. Twice he has been blown from second-story windows by explosions and when a wall caved in at the Schwartz cabinet factory fire in 1938, he was pronounced dead by rescuers.

Chief Harry Fulmer Retires

Harry H. Fulmer, veteran popular fire chief of the Indianapolis, Ind., Fire Department retired December 31st, after forty-seven years service during the last eight of which he has headed the department. He was the oldest city employe in tenure of office. His retirement at the age of 70 is based on a long-standing departmental rule, which fixes this as the mandatory retirement age.

DEATH
is
SO PERMANENT
and many times
SO NEEDLESS...

A Scott Air-Pak should be used
FIRST NOT LATER!

● Designed as fighting equipment, the Scott Air-Pak should be used on arrival at a fire, *not after* men have collapsed from deadly fumes or choking smoke. Instantly ready for use, the Scott Air-Pak delivers fresh, cool *air* (not oxygen). Each inhalation provides *all* the fresh air demanded by its wearer, regardless of age, physical condition or lung capacity. Therefore use of the Scott Air-Pak is not restricted to younger men, or men in top physical condition.

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ONLY THE SCOTT AIR-PAK HAS ALL 6 FEATURES

1 Can be used in any temperature from below zero to oven heat.

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THE HALE TYPE FZZ PORTABLE
Compact — Powerful — Practical

Frequent reports reach us telling of new uses for the Hale FZZ Portable Pumping Unit. Here are just a few of the many practical ways this unit is making itself useful to fire-fighters:

For fighting field or forest fires from moving trucks.

For "wetting down" and for stand-by use, thus releasing major equipment.

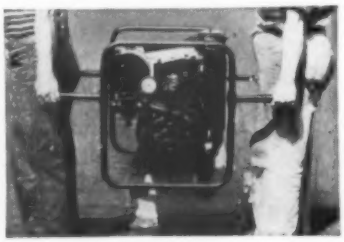
For pumping out flooded cellars and elevator shafts after fire, flood or other emergency.

For relaying water into pump or booster tank from water sources inaccessible to major Fire Pumpers.

For Factory Protection in fighting fires, before major equipment arrives.

For fighting oil or other type fires requiring foam. (Built-in Foam Proportioner available when specified.)

FZZ can be carried easily. Also available on truck-type wheels or mounted on rubber insulated steel channels.



Write today for FZZ Folder. If your Fire Company is interested in a demonstration, let us know and we will forward your request to the nearest Hale Dealer.

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Special EMERGENCY EQUIPMENT
. . . built to your specifications

Submit your requirements and let Sealand's staff of experts solve your problems.

16-MAN RESCUE TRUCK, Mt. Kisco, N. Y.
Built on standard commercial chassis. Carries 16 men and has compartment space for Flood Lighting Equipment, Inhalators, Grappling Hooks, Gas Masks, Spare Hose and other Equipment.

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Builders of RUGGED FIRE FIGHTING EQUIPMENT and DEPENDABLE FIRE ALARM SYSTEMS

Harry Fulmer originally joined the fire department because of his liking for horses. When the department was mechanized, he held the rank of captain. In 1920 he attended the New York Fire Department Fire College and upon his return he became the department's first drill master.

Political upheavals in Indiana, which have been reflected in widespread changes in the state's fire departments, failed to upset Chief Fulmer. A Republican, he was promoted to Chief by a Democratic mayor.

Chief Fulmer has been an active member of the International Association of Fire Chiefs and of most of the Indiana State fire service organizations. He has served as president of the Indiana State Fire Chiefs Association and has been active also in the civic affairs of his city for many years.

Chief Hogan Retires

Fire Chief James G. Hogan has retired as head of the Bayonne, N. J., Fire Department after forty-one years of meritorious service. The retiring chief will be 70 in February at which time his retirement would be mandatory. Chief Hogan has been active in local, state and national fire service circles. His successor is William F. Garrity.

A. G. Hall Advanced

A. G. Hall, associate editor, American Forests, and director of information of The American Forestry Association, has been named to the position of associate forester to direct the association's educational, informational and legislative programs. The organization has re-established the association's Forester's Office, suspended during the war.

Chief M. Holbrook Killed

Mark Holbrook, 29, Chief of the Westbrook, Conn., Volunteer Fire Department, was injured fatally in an unusual accident on December 6, when a steel cable used in pulling stumps slipped and struck him in the chest. Holbrook was assisting in the clearing of a site for a new fire station when the accident occurred. He died in a State Police ambulance on the way to Middlesex Hospital in Middletown.

Chief Holbrook was president of the Middlesex County Fire Chiefs Association, and a member of Siloam Lodge, A.F.&A.M., Old Saybrook.

TOM MAGNER

Retired Chief Gilday Dies

John J. Gilday, 86, a member of the Hoboken Fire Department for fifty-seven years, and its Chief from 1918 until his retirement in 1944, died December 23, 1947, indirectly as a result of a fall suffered in his home.

Chief Gilday joined the department in the days of the volunteers and worked his way up. Even after his retirement, he continued his interest in fire-fighting.

Never suffering a serious injury, although his life was often threatened during his long career as a fire fighter, Chief Gilday's most momentous struggle was the 1900 holocaust which swept the North German Lloyd piers and four

ships in Hoboken, killing 145 persons and causing $2,500,000 damage.

Chief Gilday was an active member in most New Jersey State fire chiefs associations and other organizations devoted to the fire service, including the International Association of Fire Chiefs. He is survived by a daughter and three sons.

Greely Curtis Dies

The death of Greely S. Curtis, 76, is mourned in fire circles as well as in the field of aviation. For Greely Curtis was the designer of one of the first practical fire stream computers and fire stream gauges.

Greely, who experimented with the manufacture of flying machines even before the Wright Brothers made their pioneer flight at Kitty Hawk, became interested in fire protection about 1908, at which time he introduced his fire stream computer. He continued to market this and his fire stream gauge until 1915, during which time he was a consultant with the Boston and San Francisco Fire Departments.

Mr. Curtis, who died December 15 in his home in Marblehead, Mass., leaves a wife, two sons, five sisters and a brother.

Chief Peter Herd Injured By Auto

Peter Herd, newly appointed Fire Chief at Toronto, Ont., received a fractured leg when he was knocked down by an automobile in front of his home. The chief was removed to the Toronto General Hospital and the leg placed in a cast. Deputy Chief Albert Steen is Acting Chief and Joe Waterman is Acting Deputy Chief.—JOHN KARL LEE.

Chief Gorey Injured in Ballroom Blaze

A pre-Christmas snowstorm which handicapped fire fighting operations nevertheless is believed to have prevented extension of a serious and spectacular fire that destroyed Roseland Ballroom, Taunton, Mass., Dec. 26, and sent four city firemen including Fire Chief Edward F. Gorey to the hospital. Roseland, one of the largest of modern ballrooms of Massachusetts, was built in 1924 and included bowling alleys on the ground floor and a ballroom on the second floor.

The fire is believed to have originated at the southeast corner of the roof near a large neon sign. The first alarm was received by the fire department from box 48 at 10:50 P.M. Responding firemen under Deputy Chief Morgan Sheehy were soon joined by Fire Chief Edward Gorey, who led his men to the second floor housing the dance floor and made for the blind attic in the effort to locate the seat of the flames.

A ladder was pushed through a trap door and Chief Gorey and Captain Carlton Galligan and Hosemen Howard Davis and Edward Czepiel went into the attic. Almost immediately, a terrific hot air explosion occurred, which blew Davis against Captain Galligan. They fell to the floor. The door flew shut and trapped Chief Gorey and Hoseman Czepiel. Both received severe burns

Chief POWHATAN

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AND ALL HIS WARRIORS EXTEND TO EACH OF YOU

Since 1892 Chief Powhatan has successfully served Fire Departments with well constructed fittings.

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POWHATAN BRASS and IRON WORKS
RANSON, WEST VIRGINIA
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Established 1892

THE NEW DELUXE
WHEAT
Rechargeable Spotlight
NOW AVAILABLE FROM STOCK

MODEL 253

ALL PARTS HIGH LUSTRE, CHROME FINISH—EQUIPPED WITH PROTECTIVE LENS GUARD AND ALL-LEATHER CARRYING STRAP

FEATURES

- Less expensive operation than dry cells.
- Free use of hands. Light carries conveniently on shoulder strap.
- Positive "Non-spill" construction.
- Light can be focused and directed as desired.
- Weighs only 95 ozs. complete.
- Simple to charge and water. No need to take lamp apart.
- Price and operating cost make Wheat adaptable to any budget.

2,500 FOOT BEAM
25,000 CANDLE POWER
1,000 HOURS OPERATION

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and other injuries before they could be rescued by comrades. Chief Gorey suffered also a fractured left arm, deep facial lacerations and a sprained left hip. He was placed on the critical list at Morton Hospital. Hoseman Davis received a fracture and dislocation of the left ankle and burns.

A third alarm was sounded at 11:16 P.M. Fall River, Brockton and Raynham were summoned by Chief Sheehy, who took command following the injury to Chief Gorey, at 11:55 P.M. Fall River sent one pumper and Brockton two. Raynham covered-in for the local department at the central station.

Despite all efforts, the flames raced through the blind attic, soon involving the entire roof which collapsed, followed by the north wall. The cave-in of the roof vented the structure, sending flames high in the air, showering the neighborhood with sparks, which fortunately were rendered ineffective by the snow that covered roofs, and the drizzle of rain that was falling at the time.

Manufacturers' Announcements

General Detroit Makes Appointments

The appointment of three new Zone Sales Managers is announced by E. A. Warren, Vice President in Charge of Sales for The General Detroit Corp.

The new appointees are Charles W. Self, Paul R. Warren, and John Macksey. Self will be in charge of the Cincinnati Zone Office, at 307 E. Fourth St., Warren of the Boston Zone Office at 258 Park Square Bldg.; and Macksey of the St. Louis Zone Office at 318 Title Guaranty Bldg.

Mine Safety Detector Approved

The MSA carbon monoxide and fire detector which detects fire in the baggage and cargo compartments of transport aircraft, has been approved by the Civil Aeronautics Administration. The instrument, manufactured by the Mine Safety Appliances Company, of Pittsburgh 8, Pa., was approved under the specifications referenced in the CAA Technical Standard Order TSO-C1 which establishes the performance requirements for this type of instrument. The new CAA ruling requires that all smoke detectors installed in transport aircraft after March 22, 1948, either as original or replacement equipment, conform to these specifications.

The Detector draws samples of air from the various baggage and cargo compartments, analyzes them for carbon monoxide content and gives warning of the location of dangerous concentrations by a system of lights on the instrument board in the pilot's compartment.

Herberg Joins Mack

The appointment of Sanford Herberg as a representative of its Fire Engine Division is announced by Mack Manufacturing Corporation.

Mr. Herberg has been in charge of the Municipal Fire Protection Department of the Fire Underwriters Inspection Bureau in the Twin Cities area for the past fourteen years and has a wide acquaintance among municipal fire departments in Minnesota, North and South Dakota.

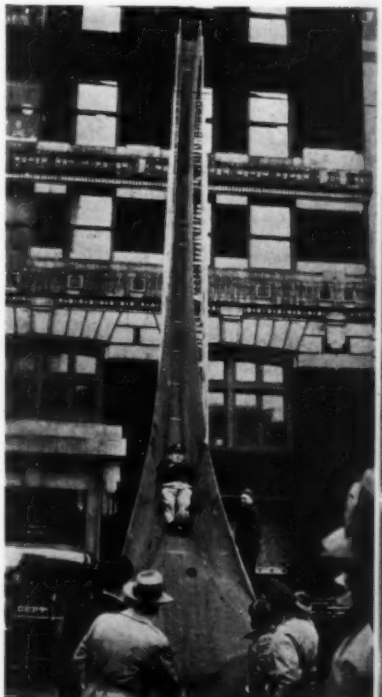
A graduate of the Engineering College of the University of Minnesota, Mr. Herberg is a registered engineer and belongs to the National Society of Pro-

Sanford Herberg

fessional Engineers. He will be associated in his new position with W. B. Moore of Mack's Chicago Division and will have his office with Pierce J. Fleming, District Manager, at 2505 University Avenue, St. Paul, Minn.

New Pitot Tube

Winthrop M. Jones, Chief Engineer, Factory Insurance Association of Hartford, Conn., has introduced a new pitot tube which, originally developed for the

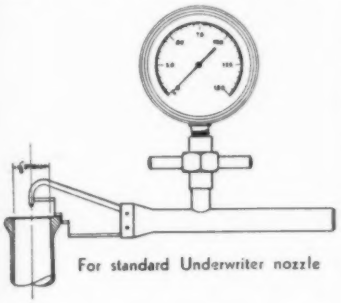


Cleveland Fire Department Tests the Evacuator

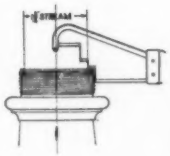
The illustration above shows Fireman Vince Rinehart of the Cleveland, Ohio, Fire Department sliding from the fifth floor of the Illuminating Company building, Cleveland, in an E. & E. Evacuator, during a recent demonstration of this unit before the officials of that city. In this demonstration the chute is attached to one of Cleveland's 100-foot metal aerial ladders.

Association, is now available commercially.

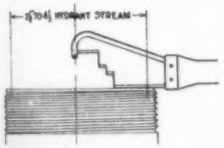
The new device embodies several distinctive features in design, construction and application, including stainless steel blade and tube, insuring long life with maximum resistance to damage; all parts silver-brazed, precluding the possibility of loose joints and consequent



For standard Underwriter nozzle



For play-pipe with out tip



Proper positioning for large outlets

leakage of misalignment; serrated blade to accommodate the standard 1⅛" nozzle and 1¾" tip as well as streams up to 5" in diameter, thereby maintaining the orifice in the center of the stream and at the proper distance from the nozzle, to insure uniformity in use and accuracy in reading; a wrenchless gauge union of nickeled brass which permits the pressure gauge to be turned in any plane without straining gauge or tube; generously sized air chamber and properly proportioned shank to insure simplicity in use; and light weight (the device weighs only 6½ oz.).

The accompanying diagram shows the application of the new tube, which is distributed under name of Jones Laboratory, 11 Mechanic Street, North Easton, Mass.

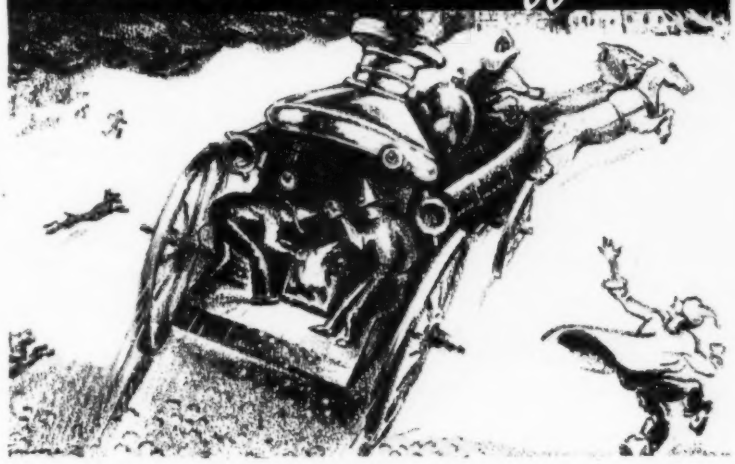
Motorola Man Commended

Ralph F. Anderson, Motorola communications engineer in the New England area, was officially commended for his personal activities in fighting the October Maine holocausts, by Col. Laurence C. Upton, Chief of the Maine State Police. He was also congratulated by Governor Hildreth.

Anderson assisted in setting up emergency radio communication centers in fire areas, working with the State Police, whose radio facilities were "the eyes and ears" of the state forestry service in combating the many fires.

In a letter praising Mr. Anderson and the Motorola Company, Col. Upton said the radio was used to direct the activities of the law enforcement division, and

FIREFIGHTING TODAY IS *Different*



Shuredry IS ON THE JOB!

The old smoke-belching steam pump is a thing of the past... and so is unnecessary damage from smoke and water! Shuredry Green-Bak Salvage Covers, in the hands of trained salvage crews, are protecting merchandise, furniture and fixtures from loss... building new records of achievement in cutting fire losses.

FLORIDA STATE FIREMEN'S ASS'N

is one of the many progressive organizations who use Green-Bak Shuredry Covers to teach modern methods of salvage to smaller departments in their state.

Shuredry

GREEN-BAK SALVAGE COVERS

Approved

Factory Mutual Laboratories and National Board of Fire Underwriters

They TOP Every TEST

Shuredry Green-Bak Salvage Covers top every known test for water penetration and seepage. Pressure-impregnated with the exclusive Fulton *dry* treatment, Shuredry covers will not stiffen in cold weather or become tacky in heat. They're always fast to spread... easy to fold and carry.

On your next order to your fire equipment dealer, specify SHUREDRY *Green-Bak Salvage Covers.*

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STERLING MODEL "M" GENERAL ALARM SIREN

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A NAME YOU CAN DEPEND ON

An absolutely dependable, tried and proven siren for communities of all sizes. Loud, clear, simple to install and no maintenance to bother with. Embodying the "know how" of the oldest and largest makers of siren signals in the fire field. Write for descriptive literature and list of towns using the model "M." Also . . . Manufacturers of a Complete Line of Apparatus Sirens.

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485 *Pages Profusely Illustrated*

Be Prepared
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Any Emergency
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THE FIRE CHIEF'S HANDBOOK

The Greatest Book on Fire Fighting

Written by Fred Shepperd, in collaboration with the Educational Committee of the International Association of Fire Chiefs.

The most complete and authoritative source of practical, helpful data—gives reliable and dependable answers to almost every question that might come up in modern fire fighting methods.

Progressive fire chiefs, interested in keeping themselves abreast of current methods of meeting fire emergencies, need this book. It is the book every fire fighter should own and study.

$4 *Per Copy Postpaid*

CASE-SHEPPERD-MANN PUBLISHING CORP.
24 West 40th Street New York 18, N. Y.

the fire control units, and it furnished several of the state's communities with their only contact with the outside world when other means of communication failed.

Mr. Anderson began voluntary fire fighting October 23rd when Bar Harbor lost its telephone communications, by establishing emergency radio communications between his Motorola two-way radio equipped car located in North Ellsworth, and similarly equipped police cars working in Bar Harbor. Anderson arranged to have a portable set sent from Augusta, which had already served at the Kennebunk fire. This was put into service at North Ellsworth, Anderson then proceeding to Bar Harbor to work with the police. From there he went to Jonesboro where another installation was made, tying in with the Ellsworth portable station, relaying information to Augusta. Anderson went 43 hours without sleep and drove 463 miles in setting up the three stations.

New Scott Air-Pak

The Safety Equipment Division of Scott Aviation Corporation, Lancaster, N. Y., announce a new model of their self-contained Breathing Equipment: the Senior Sling Pak, Model 6000-B4.

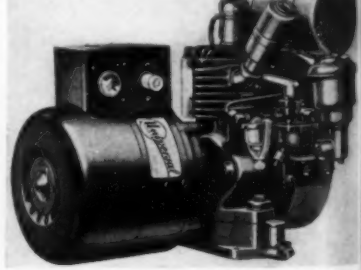
Model 6000-B4 Scott Air-Pak

Light and snugly fitting body contours, this new Scott Air-Pak permits entry into unbreatheable atmospheres through small manholes or doors.

It provides a minimum of 15 minutes use at extreme exertion, and is supplied in a carrying case with provision for a spare cylinder.

New Universal Electric Plant

The Universal Motor Company, Oshkosh, Wis., manufacturers of a complete line of electric plants from 250 watts to



New Universal Model 550-ES Lighting Plant

25 KW, has announced a new 500-watt model.

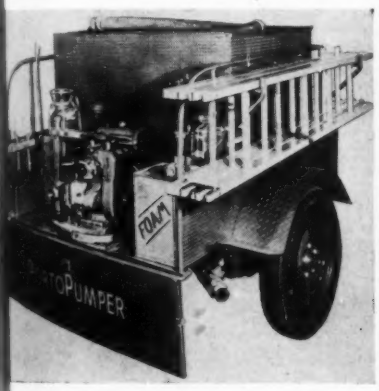
The new small, compact plant requires only two cubic feet of space. It is offered in two portable types. The total weight is below 80 pounds, which makes for easy handling. Models are powered by a single cylinder, air-cooled gasoline engine of 1½ H.P. It is claimed that operating costs are extremely low. Each model provides 500-550 watts.

These new Universal plants combine such features as a convenient generator mounted plug-in receptacle, large size, self-excited, self-regulated generator; outboard generator bearing to assure proper alignment of armature for less generator brush vibration and longer brush life, etc.

New Trailer Unit

The new "Camel," an optional model of the Porto-Pumper fire fighting trailer, is announced by the manufacturer, Porto-Pump, Inc., of Detroit.

The "Camel" model carries the same basic equipment as the standard Porto-



Porto-Pumper "Camel"

Pumper: demountable, independent-powered, 85 lb. high pressure utility Porto-Pump; 50 feet of supply hose, 200 feet of fire hose; 18-foot, 3-section extension ladder; fire axe and hand extinguisher; a selection of nozzles and hydrant adapters—plus the added feature of a 200-gallon tank.

Other new equipment offered as optional with either model Porto-Pumper includes the latest type nozzles for foam producing and fog nozzles.

Inquiries should be addressed to Porto-Pump, Inc., 227 Iron Street, Detroit 7, Mich.

What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of December, 1947.

Month Ending December 31, 1947

Camden, Ark.—Wolke Dept. Store, business district, damaged.

Middletown, Conn.—Garage owned by Jarvis Rogers, destroyed.

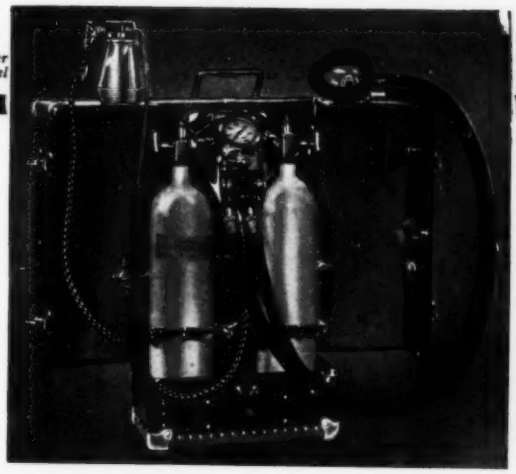
Carrollton, Ga.—Maple Street Grammar School destroyed.

Laurens, Ia.—Bldg. occupied by M. & J. R. Hakes poultry and produce plt. and wholesale grocery store, destroyed.

Cambridge, Mass.—Whse. owned by Frozen Foods Corp. damaged.

Chapel Hill, N. C.—Two bldgs. at Univ. of

Goodner Model



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- Assistor
- Inhalator
- Aspirator

NOW YOU CAN SAVE MORE LIVES WITH THE

STEPHENSON RESUSCITATOR

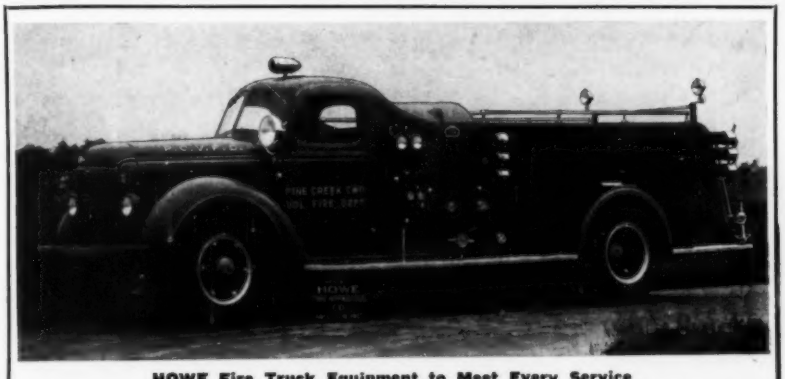
For the first time, you can use the operating pressures that are most beneficial to the patient.

Also, with the Assistor you can help the poorly breathing patient.

Oxygen may be diluted with air as needed. This not only aids the patient but conserves the oxygen supply.

Write today for literature or for a demonstration.

STEPHENSON CORPORATION
RED BANK, NEW JERSEY



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HOWE FIRE APPARATUS COMPANY, 1402 West 22nd Street, Anderson, Indiana

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Leader line sets • Hose pipes • Playpipes and holders • Spanners • Nozzles of all kinds • Axes • Couplings • Shut-off Nozzles • Extinguishers • Hose clamps • Fire hose test pump • Fire hose couplings • Hydrant gates • Pump valves.

ELKHART BRASS MANUFACTURING CO., Inc.
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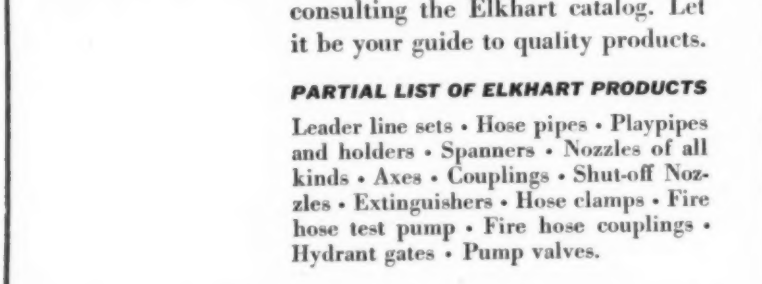
FIREMEN PREFER . . . Aluminum FIRE LADDERS



ALUMINUM IS LIGHT

When time is precious and manpower is at a premium, light-weight Aluminum Ladders are your most efficient life-saving and fire-fighting tools for they require fewer firemen to raise and operate them successfully.

ALUMINUM IS STRONG

Available in 1, 2, 3 and 4-section models, every Aluminum Ladder is heavily riveted and constructed of high-tensile-strength Aluminum Alloy. The corrugated rungs are securely fastened with aluminum expansion bushings, with the result that the rungs never become loose or break off.

ALUMINUM IS DURABLE

Practically all of the ALUMINUM FIRE LADDERS purchased since 1936 are still in use today. Being fireproof and rust proof they last longer than other types. Write for Complete Information.

"Original Manufacturers of Aluminum Ladders"

Aluminum Ladder Company

200 Carbis Street
Worthington, Pa.

North Carolina, occupied by offices of Jefferson Standard Life Insurance, Western Union and University laundry service, damaged.

Shelbyville, Tenn.—Plt. of Economaster Products, Inc., electric heater mfrs., destroyed. Spark in spot-welding dept.

Montreal, Que.—Acme Hotel Supplies Co. damaged; adj. Dynamite, Ltd., bldg., York Hotel and Taylor Adv. Agency damaged.

Montreal, Que.—Central Bottle Exchange destroyed.

Crestline, Cal.—Rim of the World Lodge, a winter sports resort, San Bernardino Mts. destroyed.

Lincoln, Cal.—Gymnasium of Lincoln Union High School destroyed.

Chicago, Ill.—Chicago Drainboard Co. factory damaged.

Fulton, N. Y.—Commodore Restaurant damaged.

Lancaster, Pa.—Auto and truck bodyworks of C. H. Koser damaged.

Panama, Fla.—First Methodist Church, including pipe organ, destroyed. Oil heater explosion.

Cadillac, Mich.—Faulk Products Co. mill destroyed.

Fayetteville, N. C.—Motor vehicle shop of State Highway Dept. destroyed.

Houston, Tex.—Carter Variety Store and Cross Timbers Community Center damaged.

Houston, Tex.—Old Southern Pacific Railroad roundhouse destroyed.

Bradford, Vt.—Bradford Opinion, a weekly newspaper; Woolworth store; Post Office bldg.; grocery; restaurant, Bradford, Inn., and other stores, 40 miles east of Montpelier, on Connecticut River, destroyed.

Chicoutimi, Que.—Natl. Granite Co. destroyed.

Salmon, Ida.—Ima Metals ore separating mill, adj. bldgs. destroyed.

Lake Forest, Ill.—Ridge Farm Preventorium dormitory and admin. bldg. damaged.

Quincy, Ill.—Feed mixer dept. of Brower Mfg. Co. damaged.

Donnellson, Ia.—Whse. of Graham Jennings Co. destroyed.

Liota, La.—Millerville Lumber Co.'s kiln and planer mill damaged.

Ann Arbor, Mich.—Wild bldg. occupied by Wild & Co. damaged.

Jamaica, N. Y.—Six stores, including two jewelry shops and a loan company, damaged.

Upper Sandusky, Ohio—Walton & Myers grain elevator, destroyed.

Charleston, S. C.—Large whse. of the Haverty Furniture Co. destroyed.

St. Johnsbury, Vt.—Central Vermont Public Service Corp. and District Office bldg. damaged.

Ashburn, Va.—Main hangar of Ashburn Flying Service at Hybla Valley Airport destroyed.

Borger, Tex.—The City drug store and Al Levine fashion shop damaged.

Granite City, Ill.—Plt. of Reilly Tar & Chemical Corp. damaged. Spark ignited waste material.

St. Louis, Mo.—Dwelling of David Livingston destroyed. Defective oil burner.

Jordanville, N. Y.—Henderson House, summer home, owned by Theodore Douglass Robinson, damaged.

Massena, N. Y.—W. L. Pratt business block occupied by barber shop, hardware store and bowling alley, damaged.

Carlisle, Pa.—Tractor-trailer, Governor Ritner Highway, owned by Mundy Motor Lines, Roanoke, Va., destroyed.

Midway, Pa.—Tractor-trailer, Pennsylvania Turnpike, 26 miles east, owned by Shirks Motor Express Co., Lancaster, destroyed. Tire blowout.

El Monte, Cal.—Firestone Auto Supply Store destroyed.

New Orleans, La.—Young Men's Hebrew Assn. bldg. destroyed.

Minneapolis, Minn.—Walter Haertel Products Co., cleaning equip. mfrs., damaged.

Oklahoma City, Okla.—Main plt. of Southwest Ice Co., Down City, destroyed.

Fort Myers, Fla.—A. and W. Bulb Co.'s offices, packing house and whse., near Fort Myers Beach, destroyed.

Van Morin, Que.—Pinehurst Inn, Laurentian Mt., damaged.

Des Moines, Ia.—Donald Freeman decorating co. destroyed.

Rollinsford, N. H.—Barn, milk shed, milking equip. and tool house on farm of Emil J. Labbe, destroyed. Short circuit.

Binghamton, N. Y.—Factory bldg. occupied by General Outdoor Adv. Co. destroyed.

Klamath Falls, Ore.—Klamath Concrete Pipe damaged. Dynamite blast.

Philadelphia, Pa.—Used car agency of William Reiner and social room of Philadelphia Labor Club, destroyed.

Hawsbury, Ont.—Genl. store, butcher shop, two apts., destroyed.

Valleyfield, Que.—Chateau Salaberry destroyed.

Marianna, Ark.—Cotton gin and drying house of Dan Felton destroyed.

Sterling, Colo.—Don Hayes Motors Co. damaged. Explosion.

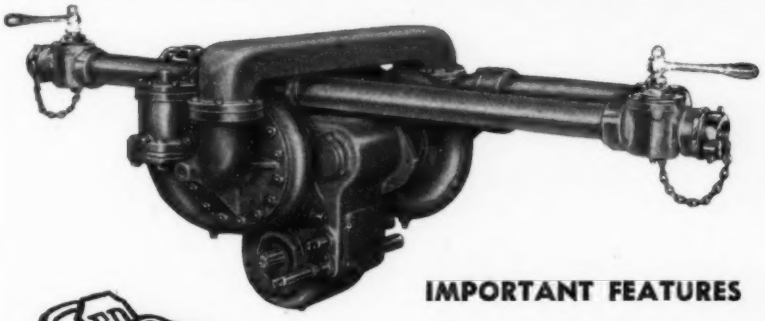
Strong, Me.—Toothpick plt. of Forster Mfg. Co. destroyed. Spark exploded dust.

Zanesville, Ohio—Casion Restaurant destroyed.

Myrtle Beach, S. C.—Two restaurants, Neptune, Dan's Cafe, a penny arcade and living quarters on the second floor of the bldg. destroyed.
Oleum, Cal.—Gasoline refinery of Union Oil Co. damaged.
Aurora, Ind.—Truck load of whisky operated by Trans-American Co. consigned from Louisville, Ky. to National Distillers, Cincinnati, destroyed.
South Bend, Ind.—Bldg. occupied by Trigon Specialties Co., South Bend Machine Wks. and Direct Mail Letter Service, destroyed.
Elkton, Md.—New Central Hotel, also occupied by movie theatre; Ritz Hotel Bldg.; Papas Bldg., also occupied by Janis Shoe Store; DiFaolo Bldg. occupied by Elkton Auto Store and Apts.; Atlantic and Pacific Tea Co., destroyed.
Everett, Mass.—Everett Lodge, Benevolent & Protective Order of Elks, damaged.
Detroit Lakes—Vacant Catholic Church and parish house at St. Benedict's Indian mission, Whitebarth, destroyed.
Chillicothe, Ohio—Charles Hunn Packing Co., destroyed.
Knoxville, Tenn.—Beach-May-Wilson's plywood factory damaged.
Williamson, W. Va.—Apt. house, two dept. stores, hotel, two restaurants, chain grocery and other structures in business district, destroyed.
West Chester, Pa.—West Chester High School main bldg. destroyed.
Spanish, Ont.—Spanish Hotel, 105 miles east of Sault Ste. Marie, destroyed.
Campbells Bay, Que.—Sam's Bargain Store and apts. destroyed.
Tifton, Ga.—Paradise nightclub destroyed.
Davenport, Ia.—St. Mary's Catholic Church destroyed. Overheated furnace.
Des Moines, Ia.—Burris-Hatch Movers, Inc., whse. destroyed.
Irvine, Ky.—Estill Country High School damaged.
Jonesboro, Ark.—Business establishments of Lambert Tire Co., Henry Franklin Hardware Co., and Cook & Hinton grocery store, destroyed.
Burrillville, R. I.—Barn of Guerin Chicken Farm, Mapleville Section, destroyed. Battery charger short circuit.
Spencer, W. Va.—Business block, Court Street, destroyed. Adj. bldg. damaged.
York, Pa.—Lumber yard, the Home Furniture Co. destroyed.
Philadelphia, Pa.—Three whses., south corner of Fourth and Cherry streets, in the heart of the whse. district, destroyed.
Portland, Me.—Randall & McAllister, waterfront coal plt. destroyed; five fishing boats damaged by 400-ton loading tower which toppled on them.
Lambertville, N. J.—Elks Club destroyed.
Cleveland, Ohio—Business block occupied by Skang's Recreation Center, L. & N. Music Co. and Raney Tire Co. destroyed.
Talihina, Okla.—Five bldgs., downtown section (including Main hotel, Jones office bldg., Holt's Variety Store and Tom & John drygoods store) destroyed.
Hays, Pa.—Plant and office bldgs. of Minnotte Bros. Metal Fabricating Co. destroyed.
Whitmore, S. C.—Simpson Dept. Store destroyed.
Athens, Tenn.—Keith Memorial Methodist Church destroyed. Defective wiring.
Murfreesboro, Tenn.—Bldg. occupied by Glamor Shop and Murfreesboro wallpaper and paint store, destroyed.
Tazewell, Va.—K. D. R. Harmon bldg., occupied by Greene Motor Co. shop and office, destroyed. Adj. Sunrise Bottling Co. damaged. Short circuit.
Wisconsin Rapids, Wis.—Bldg. occupied by Cyril Fink drug store, Coombs insurance agency offices, E. J. Schmidt jewelry store, Schnabi clothing store, Old Heidelberg tavern, Benrend barber shop and law and doctor offices, destroyed.
Hamilton, Ont.—Plt. of L & G. Paper Co. destroyed.
St. Donat, Que.—Genl. store of Alfred Dery destroyed.
Los Angeles, Cal.—Vernon Potteries, Ltd., plt. destroyed.
Chicago, Ill.—Bldg. owned by J. Curtis Real Estate, damaged.
Chicago, Ill.—Bldg. occupied by Genl. Products Co., Hummer Corp., and Howe Products Corp.; and M. Rappaport Toy Furniture, J. Cloesen garage, F. Schleiser garage, damaged.
Mount Sterling, Ky.—Bldg. occupied by Evans & Evans whse. and apt. of Everton C. Evans, trailer truck, several tractors destroyed. Mount Sterling Laundry and dwelling Ida Wrenn, damaged.
Baltimore, Md.—Bldgs. occupied by paint and hardware store and dept. store, Brooklyn section, destroyed.
Grand Rapids, Mich.—Y. M. C. A. bldg., Wyoming yds. of Chesapeake & Ohio railway, destroyed.
St. Johns, Mich.—Bldg. occupied by Bradley grocery and meat market and apt. of Ben Weiber, damaged; adj. clothing store of A. L. Rehmann, damaged.

ANOTHER BARTON-AMERICAN EXCLUSIVE

—Duplex-Multistage, Centrifugal, Midship Mounted—



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AMERICAN-MARSH
PUMPS, INCORPORATED
BATTLE CREEK, MICHIGAN

IMPORTANT FEATURES

1. First Duplex-Multistage Pump developed for fire-fighting purposes. 2. The only fire pump with THREE distinct operating characteristics — other two stage pumps have only two operating characteristics. 3. Two independent pumps — breakdown of one pump still leaves one in service. 4. Heavy construction for high pressure "fog" service.

New **HEAVY-DUTY ELECTRIC PLANT**

5000 WATTS

Only 272 lbs!

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$545.00
FOB MINNEAPOLIS

● Floodlight danger spots, operate tools, pumps and blowers with this new, large capacity, portable Onan Electric Plant. Mounted in a tubular-steel guard frame, this unit of lightweight, aluminum construction is easily carried by two men. Ruggedly built, powered by 10 H.P., horizontally opposed, two-cylinder, 4-cycle, air-cooled Onan engine. Equipped with four or six-receptacle outlet box.

NEW ONAN CK ELECTRIC PLANTS *are available in 5,000 Watts D.C., 115 and 230 volts; 2000 and 3000 Watts A.C. in all standard voltages.*

ONAN ELECTRIC PLANTS—*A.C.: 350 to 35,000 Watts in all standard voltages and frequencies. D.C.: 600 to 15,000 Watts, 115 and 230 Volts. Battery Chargers: 500 to 6,000 Watts, 6, 12, 32 and 115 Volts.*

ONAN AIR-COOLED ENGINES—*CK: 2-cylinder opposed, 10 HP. BH: 2-cylinder opposed, 5.5 HP. 1B: 1-cylinder, 3.25 HP.*

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BAR-WAY
HOSE COUPLINGS
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HIGH PRESSURE
FOG lines
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Streamlined
Full Flow
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Accurately Machined
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"ON THE ENDS—IN THE END"
IT'S BAR-WAYS

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BRAXMAR
BADGES

Standard with firemen for 67 years. We can now supply nickel and chrome badges.

John O. Veit, Pres.

C. G. BRAXMAR CO., Inc.
242 W. 55 Street, New York 19, N. Y.

Tappahannock, Va.—Mansion owned by Mr. and Mrs. Lee D. Butler, destroyed.

Bradenton, Fla.—Bakery owned by Larry Simpson, damaged.

Charlotte, N. C.—Flt. of J. & J. Candy Co., Gastonia Highway, destroyed.

Limestone, Me.—Potato house, destroyed. Oil stove explosion.

Columbia, S. C.—West Columbia Furniture Co., near Horseshoe Pond, destroyed. Sky rocket shot.

Burlington, Vt.—Matco plt., insecticide bomb mfrs. destroyed.

Felton, Lee County, Ark.—Cotton gin and drying house of T. E. Dan Felton plantation destroyed.

Lake George, N. Y.—Bldg. occupied by Chamber of Commerce office, hardware store of J. R. Earl & Sons and Nina Marie's beauty shop; and bldg. used for storage and as a garage, destroyed. Faulty oil burner.

Dover-Foxcroft, Me.—Farm bldg. on farm of Robert Harvey, South Dover Road, destroyed.

Ellensburg, Wash.—McCullough Lodge destroyed.

Hull, Que.—Pharand Block, downtown section, destroyed.

Raynham, Mass.—Town Club, Inc., a nightclub, destroyed.

Nebraska City, Neb.—Olympia Cafe and Pioneer Theatre destroyed.

Dinuba, Cal.—A. M. Taub Packing and Cold Storage Flt. destroyed.

Los Angeles, Cal.—Utility Cabinet Co. plt. damaged; defective wiring.

Bethesda, Md.—Main bldg. of Honeywell Foundation private day school destroyed.

Springfield, Mo.—Electric Theatre destroyed.

Stanford, Mont.—Thirty-two freight cars of Great Northern Railway, destroyed.

Cleveland, Ohio—Bldg. occupied by West Side Machine Tool & Die, Inc.; Merit Chemical Co.; Republic Plating Co.; Metal Craft Spinning Co.; Federal Appliance Service and Premier Fire Works, damaged.

Columbus, Ohio—Factory of Bonded Scale Co. destroyed.

Newington, Conn.—Mfg. bldg. of Lock Joint Pipe Co. destroyed.

Bettendorf, Ia.—Don Plumb floor covering co.; Charles Dorman grocery; and Scott County Farm Bureau News, destroyed. Rubbish pile.

Arnaudville, La.—Sweet potato kiln of Felix Darby, including 10,000 crates sweet potatoes and empty crates; and adj. Missouri Pacific storage shed leased to Dezauche & Sons, Opelousas, destroyed.

Burnips, Mich.—Oil field trucker garage destroyed.

Eldorado Springs, Mo.—Bldg. occupied by Cedar County Motor Co., Florence Mack Dress Shop and Davis Hardware Store, damaged.

Albuquerque, N. M.—Moriarty General Merchandise Co. store, U. S. Highway 66, destroyed.

Chaumont, N. Y.—Wheeler Block destroyed; Diefendorf Block damaged.

Fair Oaks, N. Y.—Feed store of Weld-Cox Supply Co. destroyed.

Bucyrus, Ohio—Ohio Soya Co. plt., New Washington, soybean and sponge rubber processors, destroyed.

Youngstown, Ohio—Factory and whse. of Youngstown Mattress Co. destroyed.

Woods Run, Pa.—Whse. of I. G. Wheeler & Sons, roofing material firm, destroyed.

Sumter, S. C.—Plt. of Fiber Can Mfg. Corp. destroyed.

Big Springs, Tex.—Planters Gin, Ackerly, 22 miles north, destroyed.

Milwaukee, Wis.—Bldg. occupied by Process Displays, Inc., plastic products and adv. cut-out mfrs., and Arigo Mfg. Co., dress mfrs., destroyed. Bldg. occupied by Kemnitz Corp. and bldg. occupied by E. C. Tews Distributing Co., offices of Louis Kaiser and apts., damaged.

Rochester, N. Y.—Grace Presbyterian Church destroyed.

Little Rock, Ark.—Millwork plt. of Leird Lumber Co., the Sherrill Hopson Grocery Store and Lee Variety Store, destroyed.

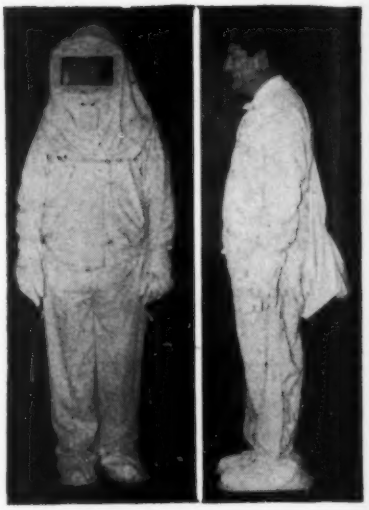
Shelbourne, Ont.—Grain elevator and chopping mill of Shelburne Co-operative Assn., destroyed.

Piedmont, Cal.—Fiedmont High School auditorium destroyed.

Lexington, Ky.—Martin Jessee Motor Co. damaged.

Somerville, Mass.—Business block occupied by E. J. Mahoney Electrical Supplies, Broadway Spa, Sparkling Cleaners and McCoy & Ford fish market, damaged.

Waterloo, N. Y.—Hercules Campbell Co. destroyed.



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FIRE SUITS
Complete with Safety Helmet

A definite necessity in every modern Fire Department. One piece—adjustable to almost any size. Specially treated for oil and gas fires!

Unused—U. S. Navy—Spec. No. N-37-S-10.
Your Department isn't complete without these suits.

Price $16.81 per suit
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LITTLE TRADING CORP.
153 No. 12th Street, Newark, N. J.

FA-26 FIRE ALARM BOX
WITH GROUNDING DEVICE

HARRINGTON
FIRE ALARM BOX

The FA-26 Boxes are built to provide the Best Fire Protection that Fire Alarm Equipment has to provide. Sixteen round—positive—non-interfering—successive, they are made of cast aluminum inside and out to provide fast, light, easy installation and a long, corrosion free life.

Boxes can be furnished with any type of door to meet your requirements. Mechanism is protected in dust-proof case enclosed in inner shell.

HARRINGTON
SIGNAL COMPANY
MOLINE - - - - ILLINOIS

Las Vegas, Nev.—Hotel Pittman, destroyed.

Manchester, N. H.—R. G. Sullivan Cigar Co. damaged.

Buffalo, N. Y.—Arena Roller Rink, Central Park section, destroyed.

Syracuse, N. Y.—Bakery, dry cleaning and laundry plt., hair dressing supply store and a restaurant in the Cook block in the business district, destroyed.

Cornwall, Ont.—Business block, Pitt Street, destroyed.

St. Jerome, Que.—Store of La Cooperative de Consommation de St. Jerome, destroyed.

Carrollton, Ky.—Main bldg. of Maple Grammar School destroyed.

East Tawas, Mich.—Richards Bldg. occupied by O. A. McCarger hardware and sport goods store and Weaver Radio Supply, damaged.

St. Louis, Mo.—Dwelling of William W. Westlake, Richmond Heights, St. Louis County, destroyed.

North Judson, Ind.—Bldg. occupied by post office, a drug store, a dry goods store and a grocery, destroyed.

San Antonio

(*Continued from page 36*)

Antonio Fire Department; C. E. Smeltz, chairman, Fire and Police Civil Service Board; Col. E. S. Rambo, General coordinator, Veterans Training Program and A. L. Rathke, Instructor Coordinator, Fire Fighters Academy.

The graduation exercises included, in addition to Mr. Troutz's remarks, an address by the Hon. Raymond South, an honor award to Fire Chief C. A. Hart; the presentation of the Class of 1947 by A. L. Rathke Instructor Coordinator assisted by Captain B. S. Huron, and the awarding of certificates, by Commissioner Raymond South, assisted by Chief Rathke.

A high point of the ceremonies was the presentation by Chief Hart of a complete gold set, including chief's badge, cap badge, lapel buttons, to Chief Andres Escamilla—gifts made through the courtesy of his classmates and instructors of the Academy.

The Cover Photo

A 127,000-barrel gasoline storage tank, located amid a forest of 400 such containers at the Standard Oil Company refinery in El Segundo, Cal., exploded Dec. 6, 1947, at 10:30 a.m. with a flash visible for over ten miles.

Instantly killed by the blast was James E. Morris, 20, a gauger who was atop the 150-foot-diameter tank when it exploded. Company officials said the flaming tank was used to store gasoline between refining processes and when it exploded it held about 11,000 barrels or 462,000 gallons.

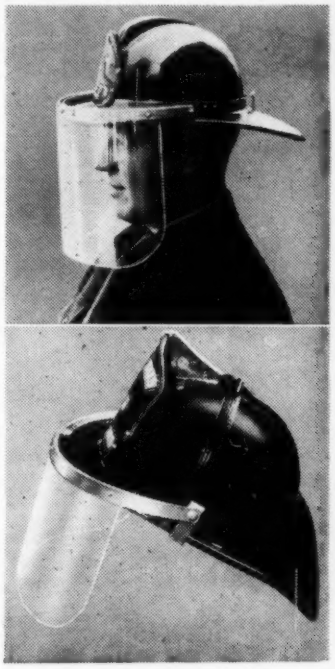
Rain was falling at the time of the blast and some reports attribute the cause to lightning. Company spokesmen declined to advance any theory as to the cause but expressed doubt that Morris was responsible.

Scene of the blast, and billowing fire which followed, was about 1500 feet due west of busily traveled Sepulveda Blvd., which at this point is Coast Highway 101. The vast installation has its own company fire fighters, experienced in combating such hazards. About twenty-five company firemen were engaged in confining the fire to the tank. They were aided by firemen from the El Segundo Fire Department, and other plant personnel. More than fifty men in all battled the blaze, using water to cool nearby exposed storage units and chemical foam to bring the flames un-

Now In Use Coast to Coast!

FIREMEN'S SAFTI-SHIELD

(Pat. No. 2421427)



- **Designed and Adapted for Use on MSA, Cairns Flintflex or Any Style Fire Helmet**
- **You Can Attach Safti-Shields to Your Helmet Easily and Quickly by Our Simple Directions**

The SAFTI-SHIELD is a definite necessity in firefighting! It will reduce fire losses because it enables the fireman to get closer to the base of the fire SAFELY.

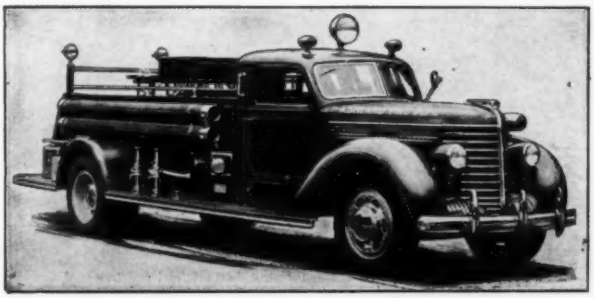
Made of Plexiglas, the tough heat resistant material that will not shatter and is clearer than glass. The SAFTI-SHIELD will not ice up when fighting against cold wind, sleet and snow. Protects face and eyes against heat, cold, sparks, flying debris, water, chemicals, etc. Write NOW for name of your nearest distributor!

DEALERS and DISTRIBUTORS—
Request Details—Few Territories Available

FIREMEN'S SAFTI-SHIELD CO., Inc.
310 Waynesville Avenue Asheville, N. C.

Shields are priced $10 (Single Units). Quantity discounts range from $7.50 to $9.00 each. Specify make, style and headsize of helmet when ordering.

Champion Fire Apparatus



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NEW 24-PAGE BOOKLET IN COLORS

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W. S. DARLEY & CO., CHICAGO 12

JANESVILLE QUALITY TURN OUT CLOTHING

Our turnout suits are giving excellent satisfaction in most of the large fire departments throughout the U. S. and

THERE MUST BE A REASON WHY SO MANY FIREMEN INSIST ON JANESVILLE QUALITY

NOW AVAILABLE

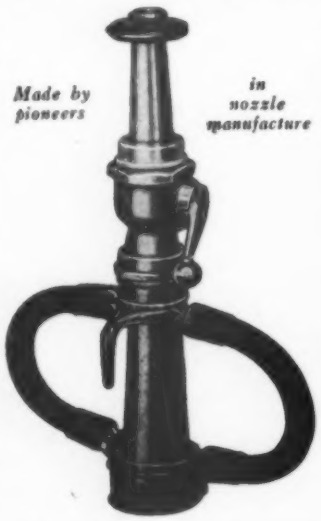
We can now supply old type ¾ Length and Knee Length Felt-lined Firemen's Boots.

JANESVILLE APPAREL CO.
JANESVILLE, WIS.

"All American Choice"

Made by pioneers

in nozzle manufacture



INVINCIBLE
NOZZLES

F. N. McINTIRE BRASS WORKS
Successors to A. J. Morse & Son, Inc.
Boston, Mass.
1837 — 1948

der control within the tank's dyked area. This was accomplished about 1:30 p.m.

Plant guards, police from El Segundo and Manhattan Beach, Highway Patrol men and deputy sheriffs were marshaled to unsnarl the traffic jam caused by thousands of curious motorists attracted by the report of the blast and the huge column of black smoke visible for twenty-five miles. Fire forces of neighboring communities stood fast, ready to aid in preventing further spread of the blaze, if called upon.

November Fire Loss

Estimated U. S. fire losses totalled $624,274,000 for the first eleven months of 1947, setting a new all-time annual fire loss record, and exceeding the $600,000,000 mark for the first time in U. S. history, it was announced by W. E. Mallalieu, General Manager of the National Board of Fire Underwriters.

The record 11-month total was boosted by estimated losses of $51,346,000 incurred in November, which is an increase of 13 per cent over losses of $44,706,000 for November, 1946, but a decrease of 7 per cent from losses of $54,946,000 recorded in October, 1947.

Up to November, the U. S. fire losses for the first 10 months of this year already had exceeded the previous annual record of $561,980,000 set in 1926. The losses of $624,274,000 for the first 11 months of this year represents an increase of 24 per cent over losses of $503,393,000 for the first eleven months last year, and sets a new annual record that will again be exceeded when the December losses are announced on January 15, 1948.

Losses for the 12 months period ending November 30 totalled $682,368,000, also the highest losses ever recorded in a 12-month period, and 23 per cent higher than losses of $552,871,000 for the 12 months ending November 30, 1946.

These fire and lightning losses under fire insurance policies are on an incurred basis, including an allowance for unreported and uninsured losses.

With Our Readers

He Says It Worked

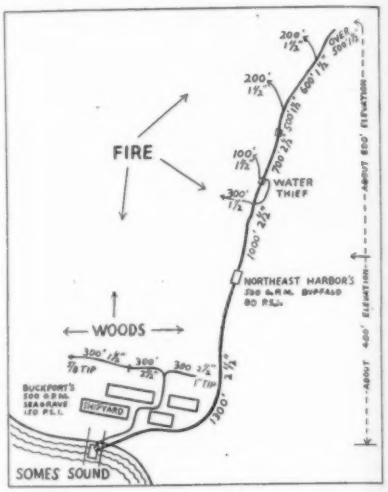
To the Editor:

Here's an account of operations during the Maine disaster. The trouble started a week ago last Friday (Oct. 17th) in a simple rubbish fire somewhere in the center of Mount Desert. The Bar Harbor boys worked on it a couple of days and about last Sunday it got away from them and spread to the woods.

It's a very tough district as it is a National Park with dozens of mountains from 1,000 to 1,500 feet and very few roads.

Days and nights are pretty well mixed up but I think it was Monday that the Park Rangers and all the towns on the Island were called in to help. Next day, all towns up to 75 or more miles were sending pumpers. The fire was then burning mostly in the forests over an area of about ten miles square, first in one direction and then another, depending upon the wind.

The chief now was staying at headquarters and shifting his crews by phone. Wednesday, all hell broke loose, and a state-wide call was sent for everything. Three of us drove down ahead of our truck about eleven in the morning. By that time all power and phone lines were down over the entire



This Is the Set-Up Where They Slid Us Out to the Water on the Boat-Ways. Our Hook-Up Broke All the Laws of Hydraulic Engineering, But It Worked! I Never Did Find Out How Much Hose Was on the End of the Line as the Guy on the Nozzle Was a Farmer Who Wore a Hearing Aid and His Battery Was Dead—Honest!

Island. A few state police cars with radio were the only means of communication; it was impossible to find out what was going on and every man and department was on his or its own. We never did find our own company and still don't know what pump was giving our boys water!

Around noon the wind was blowing a full gale (50 M. P. H.) directly toward Bar Harbor. Orders were given to evacuate the entire district and the mad-house flight started.

There are only two roads leaving the town and one of them—the one we were on—was already closed. Martial law was declared and in came the National Guard, about a thousand Army men with trucks, bulldozers, jeeps, radio cars, Red Cross, fire trucks—all going to beat hell down one side of a damn narrow road with about five thousand citizens also going to beat hell up the *other* side of the same road, with terribly thick smoke and fires around everywhere.

There were dozens of smash-ups and several men were killed. One jeep ran head-on into a snow-plow being used to clear the road of fallen chimneys and trees, and was split clean in two (services were held today!). The assistant chief here was driving down a street—saw a building falling directly over him, slammed his car into reverse and missed the whole business by inches! Too close!

Early in the evening the last road was closed—people who had been unable to get off had to leave their cars to burn, and get back onto the wharves. They were taken off by fishermen, Coast Guard and Navy boats. They are still

broadcasting today the names of dozens of missing persons. Every hotel and nearly every large estate in about a three-mile path is gone.

Friday they started to get control by having Army and Navy planes over the Island and giving orders to mobile units on the ground and they in turn would radio to boys with walkie-talkie sets placed near the pumpers. They also used boys in asbestos crash suits on motor cycles to deliver orders.

Friday afternoon we were ordered to pump from the ocean, where the only road leads to a spot where there is a steep cliff about fifty feet above the water. No soap!—but somebody had a brain-storm. Nearby was a boat yard with boat-ways where they pull out the big yachts. The gang built a platform on it, drove the truck over it, slid the whole damn thing down until we could reach our suction into the water and kept us coming and going with the tide for twenty hours. By that stunt we saved a town—(see accompanying diagram of relay operations). We had to leave the Bar Harbor area Saturday noon as we had a three-alarm back in Buckport.

Conditions are still so bad all around here that we have gas tank trucks standing by, full of water, and even have all our spare hose loaded on a timber truck—just in case, as there is no outside help available.

All foot-ball games are cancelled and every liquor store and bar is closed throughout the state. Nobody is permitted to work on lumbering operations, and they have set up a sort of emergency Civilian Defense in the lumber zones, with business men and merchants sworn in as special police and they patrol the woods roads in their cars from dark to sunrise.

FRANK PIERCE,
Ex-Chief, Buckport Me.
Oct. 26. Fire Dept.

Land of Snow and Ice?

To the Editor:

So you call this country the Land of Ice and Snow!—well, I wouldn't trade it for your weather!

Believe it or not, on November 25, at 3:02 a.m., this Department answered an alarm for a brush fire which was caused by a spark from a chimney which was about 60 to 75 feet away. The fire had a wonderful hold before this Department was called and we had to use about 1,000 gallons of water to get it out.

I was reading in FIRE ENGINEERING last night about the waterfront fires at New York; you are not the only city to have such fires. We had one this month, but the cost was not like that one in New York.

Once again, Mr. Editor, may I say we are enjoying wonderful weather and bright sunshine in the "Land of Ice and Snow".

S. A. DUNBRACK,
Chief, Whitehorse, Yukon Territory
Nov. 26, 1947.

The Round Table

(*Continued from page 38*)

ficiency and keeping them out of a rut, let me state that with the above plan in full swing, officers cannot help but improve their standard and certainly have no time to get into a rut.

YOUR COPY FREE!

SEND FOR THE AMAZING UNDERWRITERS' REPORT ON THE FYR-FYTER **INSTANT** THE "LOADED STREAM" EXTINGUISHER WITH

6 BIG ADVANTAGES

This is the extinguisher with patented ***Karbaloy*** charge, a special chemical that not only quenches but fireproofs as well. It kills fire faster, helps prevent reignition, operates efficiently at -40° F. ***The INSTANT*** is recommended for both ***Class A and B fires,*** a feature you get in no other liquid extinguisher. It throws a long stream—requires no annual recharge—operates by tapping the plunger. ***Write for details,*** including a summary of the Underwriters' report.

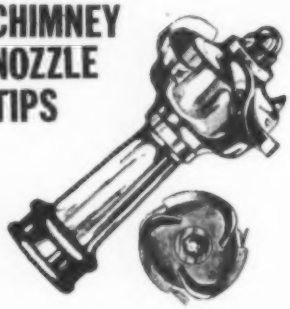
THE FYR-FYTER COMPANY
DEPT. 101-37, DAYTON 1, OHIO

LITERATURE AVAILABLE ON ALL FYR-FYTER MODELS

Fyr-Fyter ENGINES | Fyr-Fyter PUMP TANK | Fyr-Fyter FOAM | Fyr-Fyter CO_2 | Fyr-Fyter SODA-ACID | Fyr-Fyter VAPORIZING LIQUID

US UNITED STATES MOTORS CORP. 430 Nebraska St. OSHKOSH, WIS.

CHIMNEY NOZZLE TIPS



FOR QUICK CONTROL OF CHIMNEY FIRES WITHOUT PROPERTY DAMAGE

Free revolving head with three boring spirals effectively spreads mist, loosens soot and blankets the fire. Provides most effective control with a minimum amount of water. Eliminates possibility of water damage to chimney or furnace. This exceptionally useful "TRUMPET" nozzle is threaded for ¾" and 1" hose lines for attachment to discharge end of 1" or 1½" Shut Offs.

Get complete information now. Write:

THE WOOSTER BRASS COMPANY
WOOSTER OHIO

MORNING PRIDE

PROTECTED RUBBER

QUALITY CLOTHING

FIRECOATS
FIREPANTS

COLORS AVAILABLE
Black
Brown
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Coat Liner
Pants Liner

Coats Lettered on Backs

MITTENS • SUSPENDERS

See Your Morning Pride Dealer or Write

MORNING PRIDE MFG. CO.
1986 Home Avenue, Dayton 7, Ohio

This course has done wonders for the Montreal Fire Department and has filled a long-felt need; it can do the same for any department. Advanced, progressive instruction, properly planned and supervised is a must in the Fire Service of today and all fire departments big and small should give serious consideration to the establishment of such a plan. The large majority of firemen and officers throughout the nation are crying for such instruction and it is up to the chiefs of the various fire departments, in the interest of progress, to provide it.

Charles L. Slade, Chief, Des Moines, Ia.: With the exception of a teacher's training program for all officers, there has been no special training for them since before the war. However, such training is anticipated in the near future.

Due to the absence of cooperation with the Chief and his assistants by the various Civil Service Commissions over a period of many years the adminstration of the Civil Service law has been woefully neglected and the fulfillment of the intent of that law to improve the fire service has not been accomplished. Under the procedure that has been followed by the various Commissions for some 20 years, neither the Chief nor his assistants have any means of recording merits or demerits for a man. Neither does the City have a director of personnel to do so. You may therefore conclude that an officer or private receives no reward from his superiors for meritorious service or outstanding ability. As far as promotions are concerned, it is apparently the Commission's belief that the fire-fighting ability of a man can be determined merely by looking at him and that promotion should be based entirely upon a man's ability to pass a written examination, disregarding all other factors which everyone knows is necessary for a competent officer.

It is my opinion that an officer cannot get too much training. By repetition, efficiency is attained and if it were to be rewarded in promotional examination I do not believe there would be a rut period; furthermore, if the Civil Service Commission would uphold reasonable disciplinary measures by the head of the department, much could be accomplished for the efficiency and morale of the department. This too has been lacking here for many years past. It would seem that the Civil Service Assembly would have means of assisting in the correction of such conditions as now exist.

H. A. Smith, Chief, Honolulu, T. H.: About the first of this year, this department inaugurated what we call "familiarization tours." Twice each month each company with its crew goes out on tour of its district for the explicit purpose of not only familiarizing themselves with the streets and lanes, but with the several means of approach to any given building, its entrances, windows, stairways, etc. and the material stored therein. They also make a written report of any violation of any ordinance or law relative to fire safety, which are further investigated by our Fire Prevention Bureau to correct such violation. These tours were made possible for the installation of two-way radios on each piece of fire fighting equipment.

CAN PAY for ITSELF IN 6 MONTHS

by Eliminating Dry Batteries

5" TRUE parabolic, silver plated reflector; 25,000 c.p. beam; ½ mile range; sturdy metal case; corrosion proof terminals.

Only 72 ounces. Will not spill in ANY position.

Battery change in 10 seconds without returning to factory.

NON-SPILLABLE—RECHARGEABLE

Type G-23

MASTER-LIGHT for FIREMEN
Police and Watchmen

Write for new Emergency Lighting Bulletin

CARPENTER LIGHTS
200 Master-Light Bldg.
BOSTON 45
SOMERVILLE, MASS.

HEDBERG SUPER SIRENS

"THE WORLD'S BEST BY TEST"

SINCE 1920

WRITE FOR CIRCULAR MATTER DESCRIBING THE NATION'S MOST OUTSTANDING WARNING SIGNALS. FOR EVERY CONCEIVABLE REQUIREMENT.

THEY SMASH THRU TRAFFIC LIKE ARTILLERY FIRE

J. N. HEDBERG
321-349 WEST REED STREET
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FIREMEN'S UNIFORMS

BADGES

CAPS

INSIGNIA

Manufacturers of uniforms for over 50 years

RUSSELL UNIFORM CO.
1600 Broadway, New York 19, N. Y.
Write for Fire Dept. catalog No. 55

Chief---

COULD YOU PUT OUT A CHIMNEY FIRE FOR 55¢?

YOU CAN WITH IMP

CHIMNEY FIRE EXTINGUISHER

Save rushing to chimney fires over icy pavements . . . avoid slippery ladders and roofs by using IMP Chimney Fire Extinguisher. Just throw a 55c package "as is" on the hottest part of the fire in the stove, furnace or fireplace. The chimney fire will be out in jig-time without water or chemical damage. Recommended by fire chiefs, who always carry IMP in their cars for emergencies. Many volunteers carry it in their personal cars.

USE THIS COUPON FOR YOUR ORDER

F. C. FOARD & CO., Bridgeport, Conn.

Please send me ..... dozen packages of IMP. I will honor your bill f.o.b. Bridgeport.

NAME .....

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STATE .....

FIRE EQUIPMENT DISTRIBUTORS ATTENTION
Add "IMP" Chimney Fire Extinguisher to your line. Write today for special distributor plan.

Book Shelf

Flame-Proofing Textile Fabrics

"Flame-Proofing Textile Fabrics" is the title of a new monograph which has just been issued by the Office of the Quartermaster General, Military Planning Division, Research and Development Branch, and published by Reinhold Publishing Corporation, 330 West 42nd Street, New York, N. Y. ($6.75).

The monograph, one of the American Chemical Society Monograph Series, was prepared by a staff of specialists under the editorship of Robert W. Little, Major Q.M.C., as a research project of the National Research Council, National Academy of Science to meet the needs for practical methods of combating fabric inflammability during World War II.

The contents of the 410-page text include contributions by seventeen leading experts in the field of analytical research, textiles and chemistry. The eight chapters cover: Flameproofing Defined; Degradation of Cellulose; Mechanisms of Flameproofing; Test Methods For Evaluation; General Flame proofing Processes for the Treatment of Cotton Fabrics; Application of Army Clothing Fabrics; Applications of Military Equipage and Applications to Civilian Fabrics.

Seeks Fire Prevention Inspector

The City of Burbank, Cal., is receiving applications for the position of Senior Fire Prevention Inspector, which corresponds to the rank of chief of fire prevention bureau. The duties of the position, which is under the direction of the Fire Chief, include supervision of the activities of the Bureau, directing and training personnel assigned to the Bureau, formulating inspection schedules and making plans for the Bureau, etc.

Salary ranges from $337 to $417 per month (40-hour week). Requirements for the position: Age—at least 25 years; Education—graduation from college (engineering course); one additional year experience may be substituted for each year of college. Candidates must reside in California at the time of filing applications. Last day for filing, January 30, 1948.

Application forms, etc., may be secured at the office of the Personnel Department, City Hall, Burbank, Cal.

Fatal German Hotel Fire

Germany suffered its first fatal hotel catastrophe since the end of World War II when, on October 21, fire brought death to twenty-eight persons, nineteen of them women, in the burning of the Walderlust Hotel at Luisenburg, near Wunsiedel, Northern Bavaria.

The fire broke out about 5:00 A.M., in the 5-story structure which had an adjoining dance hall. Originally catering to the tourist trade, the building was since occupied as an asylum for old and disabled refugees.

As the fire, caused, it is said, by hot ashes dumped too near stored brush and kindling wood, spread upward from the lower sections, the stairs were cut off. Only the families of both the hotel keeper and the superintendent of the asylum (who was absent himself the

HYDRANTS, VALVES and Pipe Line Accessories

Write for Catalog 40

Above Tapping Sleeve and Valve are used to tap a main under pressure for a branch to automatic sprinklers, fire hydrants, etc. Cut-in may be made without interrupting water service.

VALVES: A. W. W. A. types, iron body, bronze mounted with double-disc parallel seat or solid wedge type. Non-rising stem, outside screw and yoke; or, with sliding stem and lever. Also furnished hydraulically operated. Square bottom type operates in any position. All are rugged and dependable, made of best material with highest quality workmanship.

MILL YARD HYDRANTS
Underwriters Approved

We manufacture A.W.W.A. standard hydrants and also Mill Yard Hydrant shown at right, the latter giving individual control of each outlet. Dry top, revolving head, easy to lubricate, high efficiency because barrel diameter not reduced and no working parts or obstructions in waterway. Special Traffic Model A.W.W.A. hydrant designed to yield at ground line under impact.

Approved and listed by Underwriters' Laboratories and Associated Factory Mutuals. Well known and widely used for many years.

M & H VALVE AND FITTINGS COMPANY
ANNISTON, ALABAMA

morning of the fire were able to save their lives by jumping from the windows of the third floor. Residents of the hotel who occupied the fourth and fifth floors, were for the most part trapped by the rapid advance of the flames. They either were suffocated by the smoke or burned to death.

When fire departments from surrounding villages and towns eventually arrived, the building had already collapsed.

This fire brought to the fore the realization that Germany's lack of coal has considerably increased the fire risk because of the accumulated storages of brush and kindling wood. This fuel is now piled around almost every residence and lodging house so that fire, once started on the outside, can easily spread to adjacent structures. At the same time, it is reported that fire risks have been increased by the great number of families, mostly refugees and bombed-out persons, who are lodging in nearly every city residence or farmhouse. To accommodate these additional lodgers, combustible partitions have been erected, and additional stoves installed, which constitute added fire hazards.

BERNARD PEILL

Kentucky Firemen to Meet

The annual conference of the Kentucky Firemen's Association will be held in Bowling Green, Ky., on September 7, 8 and 9.

Captain V. A. Beam, 818 Sutcliffe Avenue, Louisville, Ky., is Secretary of the Association.

Classified Advertisements

"For Sale," "Proposal" and "Wanted" advertising $6 per inch insertion, less 10% for three or more consecutive insertions.

FOR SALE

15 lb. CO-2 extinguishers. Unused Surplus. Red color. Leading manufacturer's brands. Fully charged, brass squeeze grip, $25.00 ea. Maryland Mfg. & Eqpt. Co., 1 W. Alleghany Ave., Towson, Balto. 4, Md. Phone Towson 1991.

FOR SALE
FIRE HOSE—50-FOOT LENGTHS

1½" Double Jacket CRL with Brass Cplgs. Std. Pipe Thread 400# Tested..... $16.00 Lgth.
1½" Single Jacket Brass N.S.T. Cplgs. $11.00 Lgth.
2½" Single Jacket Brass N.S.T. Cplgs. $21.00 Lgth.
3½" x 50' Lgths. Double Jacket CRL Brass N.S.T. Cplgs. 100# Tested..... $35.00 Lgth.
4" Single Jacket CRL, with Brass Fittings $22.50 Lgth.
2½" Unlined Linen Brass N.S.T. Cplgs. $9.75 Lgth.
4" x 12' Double Jacket CRL Soft Suction Uncpld. ..... $9.00 Lgth.
4" x 16' Double Jacket CRL Soft Suction Cplgs. ..... $15.00 Lgth.
4" x 10' Suction Hose, Rubber Wire Inserted Cplgs. ..... $9.50 Lgth.
1½" x 50' Chemical Engine Hose Wrapped Type Cplgs. ..... $24.50 Lgth.
2½" Brass Hose Nozzles N.S.T..... $2.15 Ea.

Navy Surplus Stock, Unused in Original Factory Cartons, Top Quality Brands.

Maryland Mfg. & Eqpt. Co., 1 W. Alleghany Ave., Towson, Balto. 4, Md. Phone Towson 1991.

FOR SALE

A Seagrave 750 Gallon Pumper in first class condition. Price $3,000.00. Monongahela Volunteer Fire Department, Monongahela, Penna.

FOR SALE

Mechanical Foam (liquid foam)—Made by nationally known manufacturer. Government surplus. $4.50 per 5 gal. can F.O.B. Philadelphia.

C & L EXPORT CO.
1332 Callohill St., Philadelphia, Pa.

SIREN SALE
UNUSED CHRYSLER-BELL SIRENS

War Surplus alarm signals, complete as follows: Unused 100 hp. Chrysler power unit with fluid drive. Powerful new siren with intense tone; Step-up transmission; Ball-bearing turntable.

SALE PRICE COMPLETE (Unused).. $1250.00
(Original Price over $4000)

SIREN UNIT may be purchased separately to be operated by electric motor or other power. SALE PRICE (Unused)..... $250.00

BERNSTEIN BROTHERS MACHINERY CO.
SINCE 1890
Pueblo Colorado

FOR SALE

500 Gal. Front Mount Fire pumps made by well known manufacturer. Clean unused surplus. Price including 2-10 foot 4 in. suction hose, $250. Frank Shortner, Edgar, Wis.

WATER PUMPER

Permanently mounted on trailer wih hose rack, heavy duty hitch, 2 tires 600 x 16, made by well-known manufacturer. Government Surplus, mechanically perfect. Complete with Dodge gasoline engine, Hale Pump: 500 gallons per minute capacity. Limited number available. Write, wire, or phone.

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Fire Equipment Dealers to sell Morning Pride protected rubber firecoats, fire pants, fire mitts and fire suspenders.

Write today Morning Pride Mfg. Co., 1936 Home Ave., Dayton 7, Ohio.

WANTED

Firemen with selling experience to sell a high grade line of fire protection equipment and fire department supplies in your vicinity. Full or part time. Commission basis. Give complete information in your letter concerning the experience you have had and references. Box 55, c/o FIRE ENGINEERING, 24 W. 40th St., New York 18, N. Y.

WANTED

Dealer—Distributors to sell fire apparatus manufactured by well-known Mid-West Factory. Prompt delivery. Attractive proposition. Address Box 30, FIRE ENGINEERING, 24 West 40th St., New York, 18, N. Y.

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Mechanical Foam (liquid foam)—Manufactured by leading manufacturers. Government surplus. $7.75 in 50 gallon lots. F.O.B. Phila., Pa.

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Unused Gov't Surplus, forest green color, 100% waterproof. Removable all wool blanket lining, rust proof snap buckles. Coat is comfortable, and easy to work with. Sizes—42-44. Price $12.75 plus postage. For particulars address:

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DOUBLE JACKET, 1¼", 50 ft. lengths. Top brand. Absolutely fresh, clean, and Sept., 1945, dating. Unused Surplus in perfect condition. Price: $12.50 per length, uncoupled. Can apply any coupling.

Full Coverage Asbestos Fire Suits	@ $5.00
Extinguishers, 2½ Gal. Foam, Copper	@ $6.00
Hose Reels with Brackets, 2½" Hose	@ $3.00
Nozzles, 2½" N.S.T., Heavy Brass	@ $2.00
Foam Liquid, New 5 Gal. Cans	@ $5.00
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FOR SALE

For Sale 1926 Reo Fire Truck with Hale 350 gallon pump. Fully equipped in fine working condition. Price $350.00. For further particulars contact, Leonard Krupp, Livingston Manor, N. Y.

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Rural fire protection. Complete fire department with 200 gallon booster tank and pump selling for $1235.00 F.O.B. Detroit. High pressure booster pump can be purchased separately at $327.75 F.O.B. Detroit. Write to

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Capable, aggressive, experienced man for career position. To organize training program, instruct in firemanship and fire administration. Staff rank of captain, salary $3240-$3600, open for promotion. Apply personnel director, City of Pontiac, Michigan by January 20, 1948. Examination Saturday, February 14 at such points throughout the nation as number of candidates warrant.

FOR SALE

I have for sale the following: Portable Pacific Fire Pumps, Navy Surplus, used but in A-1 condition, 60 gallons per minute, 100# pressure, $150.00 each. 1 used American-LaFrance Inhalator, for use on 2 patients, complete with cylinders, $100.00.

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Post Office Box 826, Rochester 3, N. Y.

FOR SALE

1920 SEAGRAVE 750 Gal. Pumper, 6 cyl. "F" Motor with standard equipment and 100 Gal. Booster Tank, 150 feet Booster Hose, good paint and tires, excellent running order. Active service to date.

1924 STUTZ 600 Gal. Pumper, 6 cyl. with standard equipment and 80 Gal. Booster Tank, 150 feet Booster Hose, good paint and tires, in good running order. Active Service to date.

Apparatus may be inspected at Central Fire House, Greenwich, Conn. Proposals will be received until 3 P.M., E.S.T., Tuesday, January 27, 1948. Board of Selectment, Town of Greenwich, Connecticut.

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CASE-SHEPPERD-MANN PUB. CORP.
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Chief Alderson Gets Unwelcome Yule Gift

Santa Claus played a mean joke on Fire Chief John H. Alderson, head of the Los Angeles Fire Department, but the episode attested the fact that fire is no respector of persons or places.

While the Chief and his family were enjoying a Christmas party, opening their gift packages, on Christmas morning in their attractive home at 1617 S. Spaulding avenue, Mrs. Alderson, glancing out the window, was surprised to see a group of men playing water on their roof with garden hoses.

Fire Brings Unwelcome "Present" to Chief Alderson

Fire Chief John Alderson of the Los Angeles Fire Department has long reminded the public of the dangers of fire during the Yule Season, but Santa "heaped hot coals on his head" when, on Christmas morning, fire swept the roof area of the Chief's home. Chief Alderson and his prize pet "Trouble" are seen reviewing the rubble, while one of his men of Engine 26 "overhauls," above.

No one had apparently thought of ringing the door bell and telling the Chief that his house was ablaze. But once the Chief had grasped the situation, it didn't take him long to get fire alarm headquarters over his direct telephone wire. Battalion Chief Chester Searl and the crew of Engine Company 26 responded from their quarters at Washington Blvd. and Arlington Ave.

Although to outward appearances only a few shingles were afire, Chief Alderson's size-up led him to check upstairs and, pushing up a trap door, he discovered that the entire roof area was burning.

Chief Searl and his co-firefighters made short work of the blaze, watched by their commander-in-chief who is reported to have taken the whole affair with his usual sang-froid.

The fire destroyed most of the roof of the residence, causing damage estimated at $3,000. It was started by sparks from the house's chimney alighting on the roof" according to the Chief.

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For complete information, have your Midwestern dealer show you our new garments now manufactured from crude rubber compounds. A letter to the factory will also bring you material samples for your inspection.

We now have available: White, Ivory and Brown crude rubber coats for Chiefs, Assistants and other officers; also all sizes short and ¾ length felt lined Firemen's boots for immediate shipment.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN MFG. CO. MACKINAW ILLINOIS
Manufacturers of the Famous **MACKINAW Coats**

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JANUARY, 1948

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WHEN WINTER CALLS

When the mercury drops and many layers of ice coat hose lines, ladders and fire engines the measure of men as well as machinery is taken in fighting one of man's most destructive enemies—fire; it is not the time for experiment, it is the time to use a tried and proven product.

The 1000 gallon pumper shown above has been delivered to the City of Cedar Rapids, Iowa, making the sixth Pirsch job delivered there, and a Quintuple now on order.

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